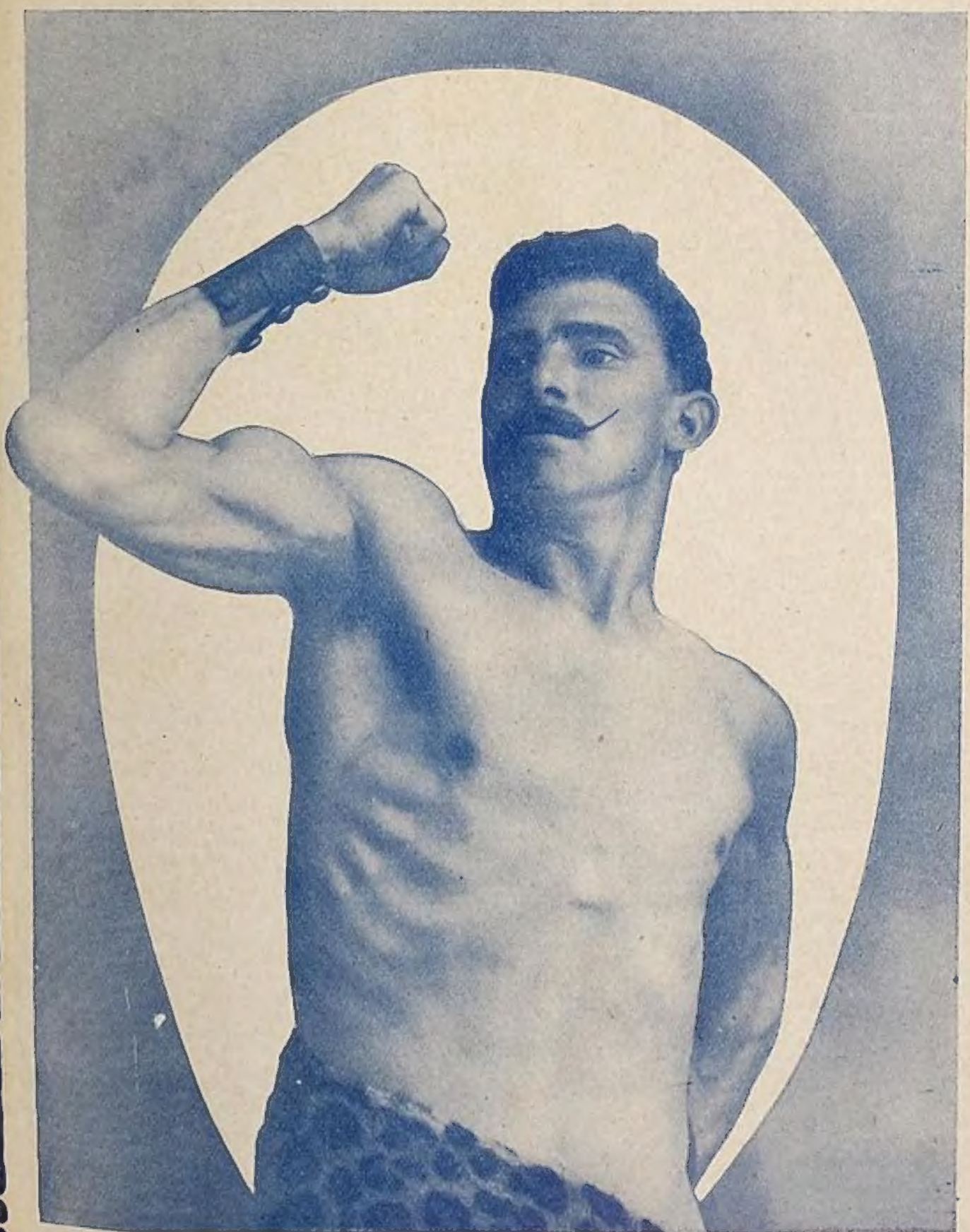
Vol. XVII. OCTOBER 4th, 1906. No. 14.

SANDOW'S MAGAZINE

OF PHYSICAL CULTURE.



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Dumb-Bells.

The Author, Mr. G. Bojus, was formerly superintendent of physical culture in the Elizabeth (N.J.) public schools, instructor at Columbia University (New York), instructor for four years at the Columbia summer school, and is now proprietor of the Park Place Gymnasium, at 11, Park Place, New York City. The book contains 200 photographs of all the various exercises, with the instructions in large, readable type. It should be in the hands of every teacher and pupil of physical culture, and is invaluable for home exercise as well.

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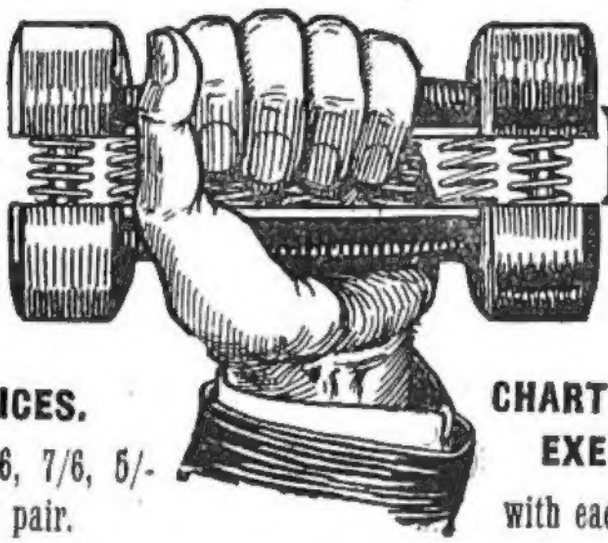

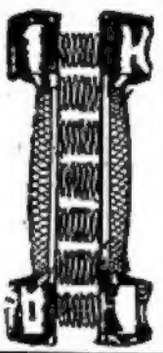

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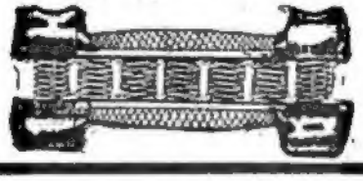

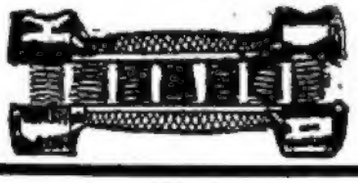

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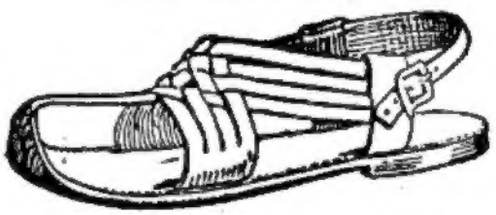

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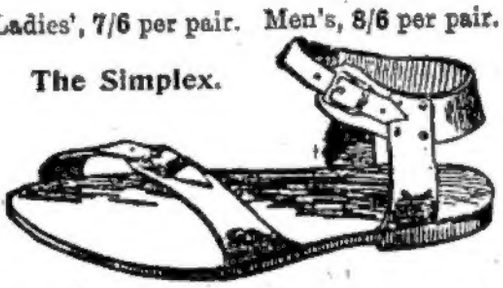

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No. 14.

OCTOBER 4, 1906.

SANDOW'S MAGAZINE

...OF...

PHYSICAL CULTURE.

EDITOR: EUGEN SANDOW.
Assistant Editor: FRANK PINK.

MOTTO:—*Mens Sana in Corpore Sano*—A SOUND MIND IN A SOUND BODY.

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NOTICE TO CONTRIBUTORS.—The Editor will at all times be glad to consider Articles, Stories, and Sketches, but in order to avoid waste of time, contributors would do well to submit suggestions for his approval before sending in their work. In no case can the Editor be responsible for the safety of unsolicited sketches and literary matter, but where stamps are enclosed he will do his best to secure their return if unsuitable.

NOTES FROM MY NOTE-BOOK.

BY THE EDITOR.

I HAVE received a really remarkable letter this week from a young man who for reasons of discretion prefers to subscribe himself merely "A member of the S.M.R.C." He is the son of a well known publican in the south-east of London, and his name which he gives me privately as a guarantee of good faith but not for publication, is one very familiar to many Londoners—and his letter is a very thorough endorsement of what I have written so often in these columns concerning the drink habit.

HAVING been, as he says, in the public-house business for many years, he has seen the terrible evil it is working, especially among the artisan classes. Too often, alas! it is the wife that is responsible. "A man," he writes, "will get up in the morning, and eat a scanty meal, which no doubt he has had to get ready himself. When he has gone off to his work, his wife will go out to the nearest pub. and have 'just one drink.' While she is there a neighbour will come in on the same errand. They have just one more, and so on. This will go on for hours and hours, and I have known it for a solid fact for two women to go into a public-house at 8 o'clock in the morning and not leave it again until very late at night. They may get intoxicated or they may not; little matters as their homes go unattended in both cases. The poor little children have to get off to school with whatever food they can find at home, or thieve elsewhere. When a man has finished work at night, he does not go home, because he knows what to expect when he gets there. He, in his turn, goes to a public-house with a pal and stays there until closing time perhaps.

"The women might say that it is because their husbands will not come home when they have finished work that they do not take proper interest in the keeping of their homes and children. All, therefore, seems to be one round ring, no

beginning, and no ending, and one will not repent before the other. The only remedy that appeals to me is to do away with most of these horrible dens that are killing thousands of poor wretches yearly. Until this is done I see no other remedy whatever. All that I have written is not an idle dream, but absolute facts witnessed with my own eyes." Surely such testimony coming from such a source is, indeed, remarkable. It certainly is strange that people can remain, and continue to be served with alcoholic liquors, in a public-house from early in the morning until late at night, and yet unless a person becomes so drunk as to be unable to take care of himself or to be disorderly, he or she may not be proceeded against.

HOWEVER, I am glad to see that Mr. Lloyd-George has publicly announced the intention of the present Government to take steps to check this evil next year. That it is an evil filling the gaols, workhouses, and lunatic asylums, no one will deny, and those who have their country's welfare at heart must declare for health, strength, and temperance. What the opium habit has been to China the alcoholic habit is for Great Britain and Ireland.

FORTUNATELY, there is a brighter side to the picture, and signs are everywhere apparent that the working man, under proper direction and with better education, is capable of more wholesome recreation than is to be found in the tap-room of a public-house. Physical culture societies and schools are now to be found in almost every town of any importance in England, and the improvement of the body is no more keenly cultivated than the culture of the mind. In a letter to *The Times*, recently, Sir James Crichton Browne, who certainly knows his subject, pointed out the improvements that have recently taken place in the amusements of John Workman.

FEW people, he said, realise the extent to which science has penetrated amongst the working classes or the good it has done them. In East London there are several thriving working men's natural history societies and clubs devoted exclusively to entomology, the members of which are not mere collectors, but give attention to the rearing of insects, to watching them through their metamorphoses, and to recording the effects of varying conditions upon them. In the large towns of Lancashire there are, says one familiar with that district, many men who, in a humble way, may claim kindred with Hugh Miller and Edwards and other men whom science delights to honour, weavers who struggle with Newton's "Principia" at meal times, and broad-speaking factory hands who dip into mathematics. There are artisans who are botanists, familiar with the Linnean and natural systems, who know the habitat of every plant within a day's walk of their dwellings, and steal a holiday when any particular plant should be in flower.

FLIES SPREAD DISEASE.

A GRAVE warning about the dangers of the ordinary housefly was given by Dr. Trevor at an inquest at Westminster recently.

The ten months old son of Mr. Pearce, a builder's clerk, living in Wandsworth, died from convulsions, while suffering from acute gastro-enteritis, following epidemic diarrhœa.

"Epidemic diarrhœa," said Dr. Trevor, "is a most rapid and frightful thing; it would destroy life in two or three hours. It is not definitely known how it is set up, but ordinary house flies are supposed to carry it about by settling on food. Even boiled milk might be "turned by these household pests."

HOW SIZE OF HEART AFFECTS US.

THE inquests of two years at the Zoological Gardens have disclosed a relation between the size of the heart and the tendency to consumption. The smaller the ratio of the heart to the body in weight, the greater is the liability to disease. The deer, whose heart weight reaches 1.90, is practically immune, while its antelope cousin, with a heart weight of 1.200, is a favourite victim. The cow, with a heart weight of 1.150, is the most susceptible of all animals. The horse, ass, and zebra, with heart weights of 1.90 to 1.100, are almost immune. The same rule proves good in human subjects, the consumptives being those with poorly developed hearts.

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OUR SOUTH AFRICAN VISITORS.

By "The Old Sport."

THE South African team is now in our midst, under the managership of Mr. Carder, himself an old devotee of the game, and a man held in the highest respect wherever football is played in South Africa.

Following are the names of the team and the positions they usually fill:

FULL BACK: A. F. Marsburg (Griqualand West). WING THREE-QUARTERS: J. A. ("Bob") Loubser (Western Province); A. C. Stegman (Western Province); Japie le Roux (Western Province); Andrew Morkel (Transvaal). CENTRE THREE-QUARTERS: Japie D. Krige (Western Province); H. C. ("Boy") de Villiers (Western Province); S. C. de Melker (Griqualand West); Jack G. Hirsch (Eastern Province). RESERVE FULL BACK: A. Burmeister (Western Province). HALF-BACKS: Hamilton W. Carolin (Western Province); Dirk C. Jackson (Western Province); Dietlott S. Mare (Transvaal); F. S. Dobbin (Griqualand West). FORWARDS: Paul Roos (Western Province); D. Brink (Western Province); P. le Roux (Western Province); H. Daneel (Western Province); A. F. Burdett (Western Province); J. W. E. Raaff (Griqualand West); W. Martheze (Griqualand West); W. Millar (Western Province); H. G. Reid (Transvaal); Douglas F. T. Morkel (Transvaal); W. S. Morkel (Transvaal); W. Burger (Border); W. Neill (Border); D. Brooks (Border).

The reserve forwards in case any of those above named drop out at the last minute are: P. O. Nel (Transvaal) and John Pritchard (Western Province).

There are twenty-eight players in all, of whom fourteen hail from the Western Province, five from the Transvaal, five from Griqualand West, three from the Border, and one from the Eastern Province.

In addition to the officially chosen team, there will be several capable exponents of the game in the Old Country duly qualified to play should injuries or illness demand the enlisting of recruits. J. Alexander, of the Hamiltons R.F.C., who will get a place in the team should any of the wing three-quarters drop out, is now in England on holiday, and there are several Rhodes scholars up at Oxford, notably W. F. Yeoman (centre three-quarter), Williamson (half-back), and N. F. Howe-Browne, and W. W. Hosken (forwards). Yeoman and Howe-Browne are from the Diocesan College, Rondebosch, and Hosken and Williamson from St. Andrew's College, Grahamstown. Howe-Browne and Hosken are Blues, and Yeoman, who played in most of the trial matches last year, only just missed his. Williamson is the young half-back who played such a good game for the Eastern Province in the recent Currie Cup tournament, immediately after the conclusion of which he sailed for England.

There are also some pretty good South Africans in residence at Edinburgh University and at the Schools of Mines at South Kensington and Camborne (Cornwall), and also at the London Hospitals, who will no doubt gladly don the green jersey with springbok badge in gold emblazoned thereon, if called upon.

SOME STATISTICS.

Those who love statistics or figures will be interested to peruse the following table of weights, heights and ages of the players.

Player.	Weight. st.	lbs.	Height. ft.	ins.	Age. Years.
A. Burmeister	12	7	5	10	*23
A. F. Marsburg ..	13	4	5	11½	*24
J. A. Loubser ..	11	6	5	8	22
J. D. Krige	10	10	5	8	27
H. A. de Villiers ..	12	2	5	8	22
J. S. le Roux	13	4	5	11	23
A. C. Stegmann ..	12	5	5	11	22
J. G. Hirsch	13	0	5	10	23
S. C. de Melker ..	10	6	5	6½	22
A. Morkel	12	8	5	11	24
H. W. Carolin ..	12	0	5	11	25
D. C. Jackson ..	11	6	5	11½	21
F. T. Dobbin	11	4	5	5½	*27
D. S. Mare	12	2	5	9	*23
Paul Roos (Captain)	14	4	5	11	*25
D. Brink	13	5	6	2	*24
W. Millar	12	8	5	11	*23
P. A. le Roux ..	13	10	5	10½	21
H. Daneel	13	0	6	0	*25
A. F. Burdett ..	13	0	5	10	*24
J. W. E. Raaff ..	13	6	6	3	*24
W. Martheze	11	6	5	9	27
H. G. Reid	14	0	6	3	*23

Player.	Weight. st.	lbs.	Height. ft.	in.	Age. Years.
Douglas Morkel ..	14	7	6	1	*25
W. S. Morkel	13	5	5	11	*21
W. Burger	14	10	5	11	*24
W. Neill	12	10	5	10	23
D. Brooks	12	10	6	0	22
The reserve forwards :					
P. O. Nel	13	2	6	0	*28
J. Pritchard	12	5	6	0	25

* Approximate.

The fixture list as at present arranged from Saturday next is as follows :

Oct. 6 (Sat.) *v.* Durham, at Durham.
,, 10 (Wed.) *v.* Northumberland, at North Shields or Newcastle.
,, 13 (Sat.) *v.* Yorkshire, in neighbourhood of Leeds.
,, 17 (Wed.) *v.* Devon, at Plymouth.
,, 20 (Sat.) *v.* Somerset, at Taunton.
,, 24 (Wed.) *v.* Middlesex, in London.
,, 27 (Sat.) *v.* Newport, at Newport.
,, 31 (Wed.) or November 1st (Thursday), *v.* Glamorgan County, in Glamorganshire.
Nov. 3 (Sat.) *v.* Gloucestershire, at Gloucester.
,, 7 (Wed.) *v.* Oxford, at Oxford.
,, 10 (Sat.) *v.* Cambridge, at Cambridge.
,, 13 (Tues.) or 14 (Wed.) *v.* South of Scotland, at Hawick.
,, 17 (Sat.) *v.* Scotland, at Glasgow.
,, 20 (Tues.) *v.* North of Scotland, at Aberdeen.
,, 24 (Sat.) *v.* Ireland, at Belfast.
,, 28 (Wed.) *v.* Dublin University, or Leinster, at Dublin.
Dec. 1 (Sat.) *v.* Wales, at Swansea.
,, 8 (Sat.) *v.* England, in London.
,, 12 (Wed.) *v.* Lancashire, in Manchester or Liverpool.
,, 15 (Sat.) *v.* Cumberland, at Carlisle.
,, 19 (Wed.) *v.* Surrey, at Richmond.
,, 22 (Sat.) *v.* Cornwall, at Redruth.
,, 26 (Wed.) *v.* Monmouth County, Monmouthshire.
,, 29 (Sat.) *v.* Llanelly, at Llanelly.
Jan. 1 (Tues.) *v.* Cardiff, at Cardiff.

As no doubt many will cut out and retain this list to enable them to follow the progress of the tour, I append also the results of matches played by the all-conquering New Zealand team last year:

Matches. Played.	Won.	Lost	Drawn.	Points. For.	Agst.
32	31	1	0	827	30

The figures represent the points scored in the games played.

1905.

Sept. 16	*v.* Devon County	..	55—4
,, 20	*v.* Cornwall	..	41—0
,, 23	*v.* Bristol	..	41—0
,, 28	*v.* Northampton	..	33
,, 30	*v.* Leicester	..	28—0
Oct. 3	*v.* Middlesex	..	32—0
,, 7	*v.* Durham County	..	19—3
,, 11	*v.* Hartlepool	..	63—0
,, 14	*v.* Northumberland	..	31—0
,, 19	*v.* Gloucester City	..	41—0
,, 21	*v.* Somersetshire	..	23—0
,, 25	*v.* Devonport Albion	..	21—3
,, 28	*v.* Midlands	..	21—5
Nov. 1	*v.* Surrey	..	11—0
,, 4	*v.* Blackheath	..	34—0
,, 7	*v.* Oxford University	..	47—0
,, 9	*v.* Cambridge	..	14—3
,, 11	*v.* Richmond	..	17—0
,, 15	*v.* Bedford	..	40—0
,, 18	*v.* Scotland, at Edinburgh ..		12—7
,, 22	*v.* West of Scotland		22—0
,, 25	*v.* Ireland, at Dublin		15—0
,, 28	*v.* Munster	..	33—0
Dec. 2	*v.* England	..	15—0
,, 6	*v.* Cheltenham	..	18—0
,, 9	*v.* Cheshire	..	34—0
,, 13	*v.* Yorkshire	..	40—0
,, 16	*v.* Wales, at Cardiff		9—3
,, 21	*v.* Glamorgan County		9—0
,, 23	*v.* Newport	..	6—3
,, 25	*v.* Cardiff	..	10—8
,, 30	*v.* Swansea	..	4—3

It will be seen that the "All Blacks" played thirty-two matches in all, and that only twenty-five have been arranged for the South Africans.

The London correspondent of the Johannesburg *Sunday Times* writes as follows :

An all-absorbing interest is taken in English Rugby Union circles in the South African tour through England, Ireland, Scotland and Wales. As the South Africans will be looked upon to emulate the football deeds of the New Zealanders, it is much to be regretted that our visitors in the forthcoming season only allow themselves five days wherein to get accustomed to their new surroundings, become acclimatised and get their land legs, before they endeavour to show Englishmen of what football stuff they are made. If they are to rise to that pinnacle of fame which the New Zealanders reached, the South Africans must win their opening match with ease. [This, of course, they did.—Ed.] English Rugby players and followers express a doubt as to whether the South Africans will treat their tour as seriously as did the "All Blacks." Personally, from what I know from three sojourns in South Africa, her Rugby football players think too much of their country to allow her to be beaten at football because they put their pleasure before the business of winning their matches, on this tour. New Zealand was successful because her team played decided football, because her seven for-

wards got possession of and heeled the ball like lightning, because after this had been accomplished the whole team showed intelligent anticipation, the player with the ball being backed up on either side so that if he passed to his right or left he knew there was another player there to carry on the movement, and because the "All Blacks" knew that attack is the best defence. The New Zealanders excelled in two descriptions of play, in which I regret to say most English teams are sadly deficient. I refer to the centre three-quarters running straight, and not boring their wing players on to their line and the necessity for following up by the whole team. These, with thorough fitness and good combination, won New Zealand her matches. There is no reason why South Africa should not follow her excellent example. I personally know that South Africa can put into the field individually quite as good players as New Zealand. The whole question to my mind is, will the South African team co-operate and combine so well as did the "All Blacks?" There is no reason why they should not, provided the South Africans play the seven forward and eight back game, and provided that they give themselves more time over here before they commence their tour. The wing forward game I dismiss as unsatisfactory, but the seven forward and three half-back game, exploited last season with such success by Blackheath, is the game for South Africa to win her matches over here with. Blackheath found that with her forwards packing two, three, two, her front rank, when they had thoroughly mastered this new formation, were able to get possession of and heel the ball so quickly that it was a physical impossibility for the half who put the ball into the scrum to receive it at the base of the scrum. Blackheath therefore disposed of her three halves thus: one put the ball into the scrum, another played scrum half, and the third acted as stand-off half. Blackheath found that her seven forwards with the new formation could always hold their opposing eight, and when Blackheath was beaten last year it was the fault of her three-quarters, and not her forwards or halves. In coming over to England the season after the New Zealanders set all the world talking about their wonderful performances last year South Africa has set herself a very high standard to follow, but if her players will adopt the seven forward and three half game, take the risks to score which the "All Blacks" did, and play the attractive, fast, determined game they played, then there is no reason why South Africa should not be bracketted with New Zealand as producing the two finest football teams at present playing Rugby.

COMFORT FOR THE FEET.

Never wear a shoe that will not allow the great toe to lie in a straight line.

Never wear a shoe with a sole narrower than the outline of the foot traced with a pencil close under the rounding edge.

Never wear a shoe that pinches the heel.

Never wear a shoe or boot so large in the heel that the foot is not kept in place.

Never wear a shoe or boot tight anywhere.

Never wear a shoe or boot that has depressions in any part of the sole to drop any joint below the level plane.

Never wear a shoe with a sole turning up very much at the toes, as this causes the cords on the upper part of the foot to contract.

Never wear a shoe that presses up into the hollow of the foot.

Never come from high heels to low heels at one jump.

Never wear one pair of shoes all the time unless obliged to do so. Two pairs of boots worn a day at a time alternately, last longer and are much more healthful.

Never wear a short stocking, or one which, after being washed, is not at least one-half inch longer than the foot. Bear in mind that stockings shrink. Be sure that they will allow your toes to spread out at the extreme ends, as this keeps the joints in place and makes a strong and attractive foot.

Never think that the feet will grow larger from wearing proper shoes. Pinching and distorting make them grow not only large, but unsightly. A proper, natural use of all the muscles makes them compact and attractive.

SOCIALISTS AND GYMNASTICS.

Dr. von Studt, Prussian Minister of Education, has issued a remarkable rescript, making Social Democrats ineligible for teaching gymnastics to young people. The school authorities throughout Prussia are prohibited by the Minister to give licences to members of the Socialist party to teach this branch of education, on the ground that the aim and effort of this party is to upset the existing order of society rather than to train its members in obedience to law and authority, the fear of God, the love of country, and loyalty to the Kaiser. In Dr. Studt's words, Social Democrats are persons morally unfit to teach gymnastics.

GIANTS AND INTELLECT.

Abnormal Stature yet Mentally Weak.

SCIENCE says the giant is an anomaly. The latest investigators of this interesting subject are two eminent Frenchmen, Professor P. E. Launois and Dr. Pierre Roy, who have searched all medical literature on the subject and made investigations at first hand.

Giants always have been an interesting subject, for the earliest folk-tales are concerned with gigantic human beings. Every child has trembled at the story of Jack the Giant Killer and the "Fee, fi, fo, fum, I smell the blood of an Englishman!" According to the Rabbinical writings, Adam was of gigantic stature before the "Fall," but then became of ordinary size. In the book of Genesis, chapter vi., it is stated that "When the sons of God married the daughters of men" their offspring were giants.

The famous giant of early times was Og, King of Bashan. Samson must have been of more than ordinary size as well as of extraordinary strength, but the most famous of all Biblical giants was Goliath, whom David slew. How tall he was no account states, but he must have been most awe inspiring to judge from the reluctance of any of the warriors to meet him in single combat until David offered to meet the redoubtable champion.

Hesiod and other poets of antiquity sang of the Titans, or Sons of Earth, of huge proportions and great strength. There are tales of the contests between the giants and the gods running all through Greek mythology. The theme is always the same, the contest of brute, unintelligent strength against divine harmonious power. The weak but intelligent always conquer, just as in the David-Goliath story. The giant is always a huge child. There was instinctive appreciation of the fact that the growth of the body is at the expense of the brain. The Greeks understood this so well that they made their Apollo of only medium height, with broad, high forehead, radiating intelligence, while their Hercules had the head of an idiot.

A long time ago Henrion presented a very learned paper to the French Académie des Inscriptions et Belles Lettres in which he conclusively proved the degeneration of mankind to his own satisfaction, claiming that the records showed the following heights of the world's great men: Adam, 125 ft. 9 ins.; Noah, 105 ft.; Abraham, 28 ft.; Moses, 15 ft.; Hercules, 10 ft.; Alexander, 6 ft.; Cæsar, 5 ft.

Giants are generally very weak-minded. There is the old story of the court of Vienna amusing itself by setting the dwarfs against the giants, to the discomfiture of the latter. It is also related that in the court of Archduke Ferdinand, of Austria, a dwarf had become weary of the taunts of the pet giant, who always made fun of his size. The dwarf begged the master to drop one of his gloves and command Aymon, the giant, to pick it up. When the giant stooped the dwarf gave him a good slap on the cheek, at which the court roared with laughter. The giant could not support the shame and died of chagrin not long afterwards.

Cruelty, or something worse, is characteristic of many giants. Emperor Maximinius, the Roman giant, became, we are told, so odious on account of his cruelties that he was assassinated in the year 258. Daniel, the giant doorkeeper of Cromwell, had to be confined in Bedlam on account of his mystic exaltation and prophetomania. Some are given to alcoholism, others to stealing, indicative of lack of mental stamina.

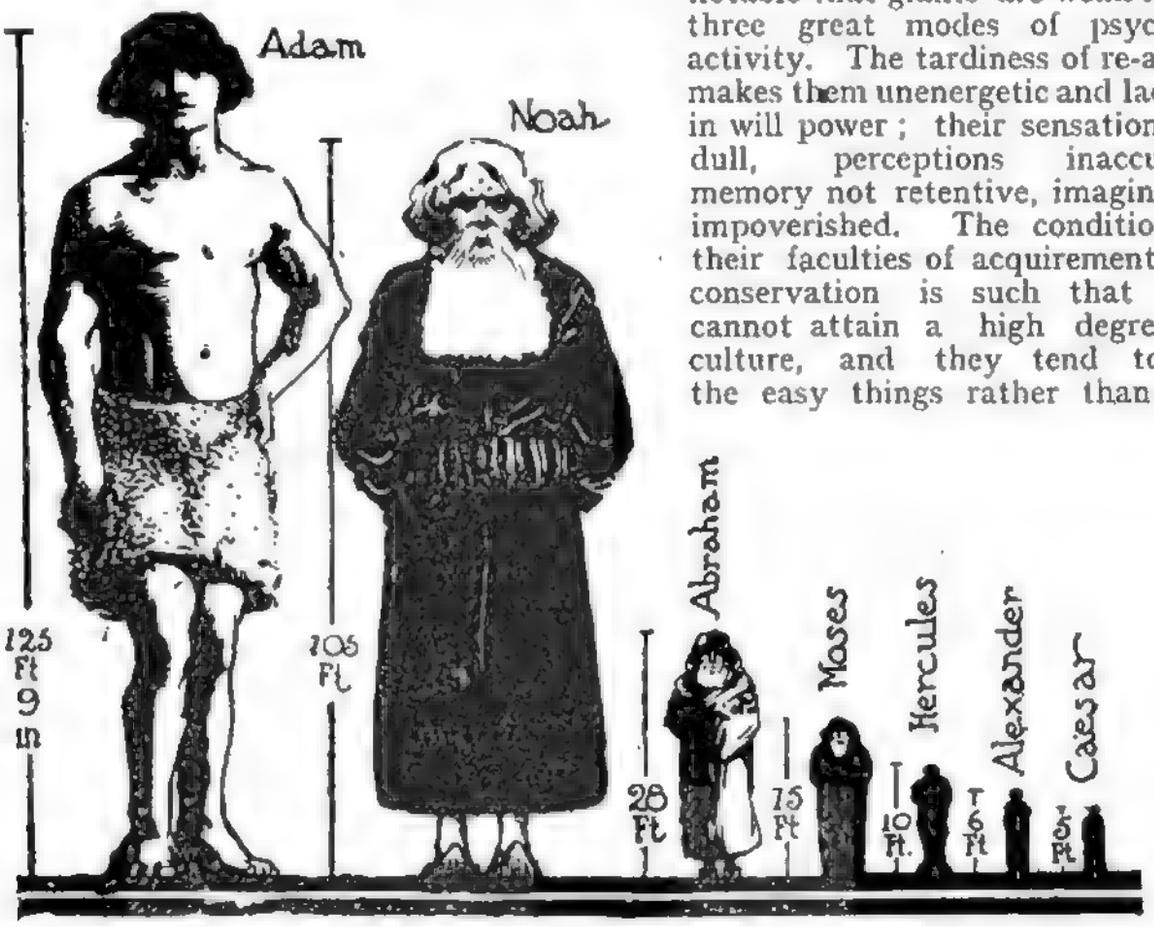
Historical information and anthropological studies of the human body and harmony of the parts when normally developed, point to severer conclusions as to the diverse malformations accompanying giganticness. If it be true that

giants are notable for their great height some of them preserve all the marks of infantilism throughout their lives; others increase in breadth; while still others are both infantile and gigantic in proportions.

Some instances may be cited illustrating these classes. Charles the Great, as Charles F. was called, was born in Paris in 1872, father and mother of medium height. He weighed twenty-one pounds at birth, and grew very rapidly from that time. When twenty-one years old he measured 1 m. 86 (6 feet 4 inches), being then in the army, where he performed the usual duties. In 1896, when he left the army, he measured 1 m. 94, and he continued to grow, reaching the height of 2 m. 3 in 1901.

He had been exhibited as the "Only French Giant," and now his legs began to give way. Violent headaches afflicted him, and he became very thin, losing much of his vigour. In 1902 he gave every sign of weakness and lack of maturity. His height was due to the undue prolongation of his legs, which were malformed considerably. His hands were very large when compared with those of the normal man, and his feet thick, deformed and large. His face was crooked, the right side being less developed than the left, and the left ear was much larger than the right.

Similar defects are to be noticed in all the giants who have been studied scientifically. As the gigantism develops the mental power decreases. It is especially notable that giants are weak in the three great modes of psychical activity. The tardiness of re-action makes them unenergetic and lacking in will power; their sensations are dull, perceptions inaccurate, memory not retentive, imagination impoverished. The condition of their faculties of acquirement and conservation is such that they cannot attain a high degree of culture, and they tend to do the easy things rather than the difficult. It is, however, especially in the powers of elaboration (reasoning judgment, etc.) that their intellectual weakness is most noticeable.



Adam was the first Giant!—Chart showing Degeneracy of Physique as described by a famous Professor of Anthropometry.

The giants are, as a rule, liars in proportion to their height, telling tall tales of their relatives, their age, and their experiences. They are indolent, unamiable, irascible, unsociable, and unpleasant to live with. Some of these giants will cry for a trifle, and in the next breath boast of their strength and bravery.

ARTICLETTES.

BAD NEWS FOR VEGETARIANS.

The question whether surgical operations are necessary for appendicitis continues to interest French physicians.

Microscopic examination in every case of appendicitis that has come under the observation of Professor Blanchard and Professor Metchnikoff has revealed the presence of certain parasites in the appendix. "Appendicitis," says Professor Blanchard, "more especially occurs during the hot weather, and although not contagious or infectious, it frequently assumes the character of an epidemic in certain districts."

Now, according to the professor, market gardens in the neighbourhood of great cities, such as Paris and London, are frequently manured and fertilised by the deodorised and chemically treated product of the city sewers. In these market gardens the vegetables are forced, and examination shows that they contain numerous intestinal parasites, and especially the eggs of the dreaded trygocephal.

The professor says that a surgical operation for appendicitis is absolutely unnecessary, and that it should never be performed unless some hard substance such as a cherry stone has been accidentally swallowed by the patient. He urges legislation to forbid the use of deodorised and chemically treated sewage as manure, and that thymol should be extensively used against intestinal worms.

"Appendicitis," adds Professor Blanchard, "when not the consequence of the accidental swallowing of some hard substance, is undoubtedly caused by the parasite to be found in cabbage, turnips, carrots, and cauliflower. The danger lies in eating vegetables that have been forced by manures or watered by contaminated well and spring water."

WRESTLING SENSATION.

There was a sensation at the London Music Hall, Shoreditch, recently, when Antonio Pierri's international group of wrestlers appeared for the first time in England.

His champion is Hussein Mahmout, of Albania, concerning whom Pierri offers £20 to any man (no nationalities barred) whom Hussein fails to throw in fifteen minutes. The challenge was taken up by Munro, a well known trainer, and at the last show Hussein Mahmout and Munro's "unknown" faced each other in the catch-as-catch-can style. The "unknown" was Louis Berg, a Frenchman, who weighs 16 stone, and has great muscular development. Mahmout weighs 14 stone, and on the face of it his challenge to Hackenschmidt seems slightly absurd, though he is a wonderfully clever wrestler.

Mahmout and Berg wrestled for about seven minutes, the latter contenting himself with a defensive position. After some very clever play Mahmout got what the gallery was emphatic in describing as a strangle hold.

Mr. Pierri, who acted as referee, declared it to be a true fall. Mr. Munro protested, and claimed the £20. A fine row ensued, and the management promised that if Munro's "unknown" would try conclusions again Pierri would consent to an independent referee.

ALCOHOL VALUELESS.

During the last twenty years dietetics have been very carefully studied and a long series of experiments conducted to ascertain the real value of alcohol. The result of these experiments is certainly such as to justify the belief that alcohol has no value at all, and that, far from being a food, it is actually a form of slow poison. Dr. Sims Woodhead, Professor of Pathology at Cambridge University, is on this point at one with Sir Victor Horsley, if indeed he does not go farther than Professor Horsley. He declares that alcohol, when it enters the human frame, conducts a malefícent war against the phagocytes, or police of the blood.

It is a striking fact, says the *Daily Mail*, that science and morality are now at one in ruling alcohol to be a danger to the human being. Human nature being what it is, the rational arguments which science brings against alcohol are at least as likely to make for temperance as the transcendental arguments which religion employs. It has for years been observed by mountain climbers that work in the high altitudes, which most severely tries human vitality, is better accomplished by abstainers, and it is, of course, a commonplace that any insurance company will give special terms to teetotalers, because their expectation of life is longer than even that of the most moderate drinkers. If alcohol be injurious and poisonous, the abstainer's longer life is explained; while if alcohol be a harmless drug or a valuable food, the insurance results are quite inexplicable.

HOW WORRY KILLS.

The brain, as is well known, is the seat of government in the body, directing and controlling all its functions, and being the nutritive centre of the organism any impairment of its structure inevitably results in degeneration of the organs of digestion and assimilation. This destructive process may not be confined to one or even two organs; in fact, no limitation can be placed upon it; and it is only a question of time when physical degeneration reaches such a stage that death ensues. It is not contended that occasional worry will produce these disastrous results, but the constant brooding over one particular disquieting idea causes deterioration of the brain cells, and if long indulged in, they become injured beyond repair. With the failure of the particular trophic centre the organ or organs under its control speedily degenerate. It is therefore no mis-statement to say that worry kills.

SPEED SWIMMING.

The Three Most Popular Methods.

THE evolution of the swimming stroke has been so closely allied with the history of racing as to have left the impression in the mind of the average individual that the so-called "speed strokes" are adapted to competition only, and not at all practical for pleasure swimming and bathing.

No more erroneous belief could be entertained. In the development of the stroke the object in view has ever been the finding of a set of movements which would enable one to obtain the greatest possible speed with the least expenditure of power. The up-to-date strokes, far from being too punishing for the ordinary mortal, are what he needs to properly enjoy swimming. The same amount of application which is necessary to master the breast stroke will enable one to learn the more modern methods which insure more speed and less exertion.

Only three strokes, writes Mr. L. De B. Handley, in *Outing*, are now recognised as standards: the side, the trudgeon, and crawl. All three are taught the world over much in the same manner and may be classed as distinct types. The side stroke is gradually disappearing and might well be termed obsolete, were it not that many good coaches teach it as a stepping stone to the trudgeon and find the system highly satisfactory.

The belief generally held that to acquire a speed stroke one must master the breast stroke first, is incorrect. As a matter of fact, the leg actions used in the various strokes are so very unlike as to make it much more sensible to start right in on the one that has to be learned. Those who have had experience in coaching will readily understand the reason of this. It is far easier to teach a novice than to make an old timer change his method, for in the former case one has but to teach, while in the latter one has to correct first and then teach.

Whether a man be a swimmer or not, in taking up a new stroke he should begin with the leg movement only. In the side stroke it is called the scissor kick. To acquire it find a place with water at least three feet in depth, where you can use either a stationary or a floating support. Take hold of this support and let your body rest on the water, on its side, with legs straight and well together and feet as if standing on tiptoe. Choose the side that feels most comfortable. Now proceed to open the legs very slowly, not frog fashion, but front and back, as in walking. The upper should be brought forward almost straight, the under, back, bent to a kneeling position. When they are about two feet apart snap sharply together.

The faults to be obviated are: bending of the upper knee; opening the legs too wide or too fast, and turning the feet up, instead of down. In each of these faults a large resisting surface is presented to the water, which naturally retards speed. Sufficient time should be spent at the kick to acquire it thoroughly, then the arm can be started.

The position of the body is unchanged. Lie on your side, with body and legs in a straight line; both arms perpendicularly over your head and the palms turned slightly away from the face. Bring upper arm down smartly, keeping it rigid at elbow and wrist, palm of hand open, fingers well together. Carry it through the water just below the surface, describing a semi-circle to end at the thigh, then bend arm at the elbow and bring it forward well above water, until it is straight before you in the original position. The under arm should be started when the upper one is just about through with its stroke, and should be brought down with force, almost parallel to it, so that at the finish it brushes the lower thigh; then it is bent at the elbow like the other and brought forward just below the surface. The upper arm should rest on the water, at full reach, while the under one recovers, until it is at the height of the head.

The principal faults to be obviated are: reaching with the right arm in front of the left shoulder, and *vice versâ*, as this propels the body in zig-zag fashion; bending the

elbow while pulling, as it lessens the leverage and occasions loss of power; and hitting the water with hand or arm on the recovery, as it retards progress.

The action of the arms in the side stroke entails a rolling motion of the body which buries the face at every stroke. This necessitates an artificial way of breathing which has to be learned before the stroke can be swum properly. It is advisable to make a special study of it. Air should be inhaled through the mouth as the upper arm is being brought down, and should be exhaled through the nostrils, under water, while the under arm goes forward. Some find this impossible, even after long practice, and breathe in and out through the mouth during the short period that the face is above water, but if one can acquire the other way it is far the best.

The legs should be opened very slowly just as the under arm starts its recovery; they should be snapped together when the upper arm is in the middle of its stroke. If properly timed the side stroke gives a clean, even progress, without a break or a check.

Let us recapitulate: Upper arm first; inhale while this arm is being snapped downward; legs fall in as the arm finishes; under arm follows immediately afterward; legs open slowly during recovery of under arm; air exhaled at the same time.

In learning the trudgeon the swimmer lies flat on the water, face downward, body straight, arms at full length above head and perpendicular to shoulders, hands open, palms downward, legs straight and well together, toes pointing down. As most men find it more comfortable to swim on the left side (right side up), let us take the stroke that way. To swim on the right, one has but to reverse the order of instructions.

Catch the water hard, with your right hand slightly curved inward at the wrist, and as you do so roll sufficiently on your left side to bring your mouth above water for a breath of air. Bring the arm down just below the surface and almost parallel to it, until it touches the thigh, then bend it at the elbow and carry it forward cleanly well above the water until it is on the full reach again.

The left arm maybe brought down either like in the side stroke (parallel to the right one) or well out to the left, just below the surface. Distance swimmers usually affect the former method, sprinters the latter. As the left arm comes out of water the body returns to its original position flat on its face, so as to enable the left arm to be brought forward clear of the water, and remains so, until the arm is near the full reach, whenthe right arm again starts on its downward course.

The same kick that is used in the side stroke, the scissor kick, is used in the trudgeon, and the entire timing of the two strokes is identical. The only real difference between the two lies in the recovery of the under arm, though of course this difference entails slight changes in the position of the body and in other details.

The third and most recent of strokes, the crawl, while taught in the same manner pretty nearly everywhere, seems to take on much of the individuality of the swimmer as he becomes proficient, and this has led many of our experts to believe that we have only found a type, out of which several distinct varieties will be evolved as we know it better.

The present method of instruction is to start the swimmer with body flat on the water, as in the trudgeon, and to make him keep that way as much as possible. twisting his head only, instead of the whole body, to take breath. The arms, however, are not held out at full length, but rest on the water slightly bent at the elbow, the hands at the height of the head. They are brought down with force until near the hip and then shot swiftly forward again without any pause. Their action is alternate, and as the orbit described is shorter than in the trudgeon, the time is naturally faster. In sprinting the "crawler" only breathes at every second or third stroke.

The leg action can hardly be characterised as a kick; it is merely an up-and-down thrash of the lower part of the legs from the knee. To acquire it, lie on the water as told above, with legs straight but not rigid, and toes pointing downward. Now move them up and down alternately, so that they almost brush each other, having care to keep the upper part of the leg rigid. The movement should be from the knee down. At their widest spread the feet should not be more than sixteen or

eighteen inches apart. Their speed may vary according to the distance one is to travel.

In Australia the legs are made to keep time with the arms, but in America it has been found more satisfactory to make the two movements absolutely independent of each other. Harmony of movement in the crawl can only be acquired with practice. Each man has so much individuality that general rules cannot be given.

In all that I have said above I have had in mind the great majority of men who swim only for pleasure and exercise, and who have no thought of competing. Nevertheless let me assure the prospective competitor that he will have to take up the preliminary work in the very same manner. I will here add a little advice that may help him in his racing career.

First of all, let me recommend to him not to attempt any fast work until he has mastered the stroke thoroughly. A few months devoted to practice will not lose him many prizes, and success will amply make up for them later.

Most beginners consider racing a matter of strength and training only. They will work away at the fifty yards without a thought to form until they have mastered enough speed to enter a novice race, and they begin their competitive career with no other preparation. What is the result? They win, eventually, and continue with their incorrect methods, never rising above the mediocrity of sprinters and, of course, never being able to negotiate the distances at all.

It is form that counts in swimming, and without it even the most favoured by Nature cannot attain proficiency. Punishing some time trials should be scrupulously avoided while one is learning a stroke. The temptation is great to find out how fast one is going and what progress one has made, but the swimmer should reflect that form departs rapidly as the muscles get tired, and then faults are accentuated and gradually become permanent. Salt water is preferable to fresh to learn in. It has more buoyancy and, as can readily be understood, the less effort required to keep afloat the more energy left to devote to form.

In racing, the dive and the turn are details of great importance. A good dive will give from one to three yards over a bad one, and it is calculated that an expert turner gains about a second at each turn. This, incidentally, accounts for our indoor records, made over a short course, being so much faster than the outdoor ones, made over long courses. To dive properly, try to strike the water on a slant, with head erect and arms well up, so as to just skim the water and remain on top, ready for the first stroke as soon as the body begins to lose its impetus. Do not use the legs until the second arm stroke.

To turn effectively the swimmer should calculate the length of his strokes in approaching the wall so as to reach it with his upper arm extended above the head. As soon as the hand touches, it is placed so as to get a purchase, and the body is swung around, following the direction of the arm, until the feet come in contact with the wall. Then the under arm gives a short, backward stroke so as to force the body back until the knees are well bent, the arms are brought quickly above the head, the legs are shot out hard, giving one a good shove-off, and the arms are set in motion again just as the body begins to slow up. As in starting, no kick wants to be taken until the second stroke.

To seek the origin of the various strokes would mean to take up the history of swimming from its birth, for each is but a phase of a continuous evolution. And at that, history is not very clear on the time and author of the various phases. The side stroke in its present form was first introduced to the public by Joey Nuttall, who for many years was considered the best all round swimmer in the world. He it was who, with the help of J. H. Tyers, is supposed to have discovered the scissor kick. They adapted it to the arm stroke then used by champion Horace Davenport, the originator of the single overarm, and evolved the side stroke. It had a long life, and some of the fast men swim it to this day. Nuttall, who still holds some world's records, never knew any other.

In America the side stroke has had several famous exponents. Donald Reeder, a many-time champion and record holder was one of them, as was Fred Wenck, who won the mile championship twice in succession with it, establishing new figures

for the distance each time. Until a few years ago the side was the only racing stroke we knew of.

The trudgeon, which superseded it, was brought to light by one Trudgeon, another Englishman, who gave it his name. Although he is looked upon as the inventor, it is no secret that he copied it from the Indians of South America. He did excellent work with it and won many good races, but it was left to an Australian, Alfred Holmes, of Balmain, to make it famous. He used it in establishing his world's record of 1 minute 2.2-5 seconds for the hundred yards.

At the time of its appearance the trudgeon was condemned as too punishing for a distance stroke. Fred Lane, a countryman of Holmes's, decided that it was not, and set out to prove it. This he did and to him is given credit for the improvement of the scissor kick. The trudgeon is now the favourite stroke of the fastest swimmers. Daniels, the world's champion, and Billington, our fastest swimmer, both having adopted it as their favourites.

TO FIGHT THE SWEATER.

An anti-sweating league has just been formed to secure a minimum wage.

It is proposed to establish branches in all the large cities, which shall be affiliated with the central body, and in order to make the membership as wide as possible the subscription has been fixed at the minimum of 1s.

Mr. George Cadbury has consented to become President, and the Earl of Dunraven has been requested to act as treasurer. An influential list of Vice-Presidents is under consideration, and the following executive has been elected, all, with two exceptions, having already consented to serve: Mrs. M. A. Gasson, Miss Mary MacArthur, Miss Gertrude Tuckwell, Mrs. Tennant, Miss C. Black, Mrs. W. Pember Reeves, Mrs. Bernard Shaw, Mrs. Gladstone, the Rev. H. Russell Wakefield, Lord Lytton, the Rev. Peter Thompson, Mr. L. G. C. Money, M.P., Mr. Herbert Burrows, Mr. W. H. Lever, M.P., Mr. George N. Barnes, M.P., Mr. Thomas Holmes, Mr. A. G. Gardiner (Chairman), Mr. George Shann, M.A. (hon. sec.).

An appeal is being issued, and all persons interested should communicate with Mr. George Shann, M.A., 19-21, Bouverie Street, E.C.

We were indebted for the photo of Louis Burgoins, reproduced in our issue of September 27th, to the proprietors of the London *Sun*.

DIET AND PHYSIQUE.

M. Niceforo, the professor of criminal anthropology in the University of Lausanne, points out that in all countries the effects of poor food and bad sanitation among the very poor are the same. In Italy a study of 300,000 conscripts has proved that the rich recruits have a greater average height than the poor ones. The same thing is observable in Germany, Spain, France and elsewhere.—*Globe.*

IT WAS DIFFERENT.

The customer at the cheap eating house, with some exertion had dug a spoonful from the contents of the dish. "Waiter," he said, "this side tastes different somehow from the mashed potato I usually get here." "It is different," said the waiter, inspecting it. "It's the chunk of putty for a broken window pane, that the old man has been making a fuss about for the last ten minutes. He'll be glad to get it back again. Thanks."

THE RULE OF SPARE LIVING.

If we could exactly tabulate the mode of life of our distinguished men of all professions who have lived to a great age and been intellectually active to the last, I doubt not, judging from the details we have, that we should find the rule of spare living thoroughly represented in their histories. I think it is so with our men of science, our great lawyers, our doctors, and our clergy, who live on far past the allotted span of threescore years and ten.—Dr. Andrew Wilson, in the *Graphic*.

HURTFUL HOLIDAYS.

The question whether all this holiday making is really for the good of the people who take part in it is one which should certainly be asked. In many cases holidays are distinctly hurtful. They often mean over-fatigue, an endeavour to accomplish too much within a limited time, irregular feeding, and over-indulgence in both alcohol and tobacco. Men go away professedly to recuperate, and they come back stale.—*The Hospital.*

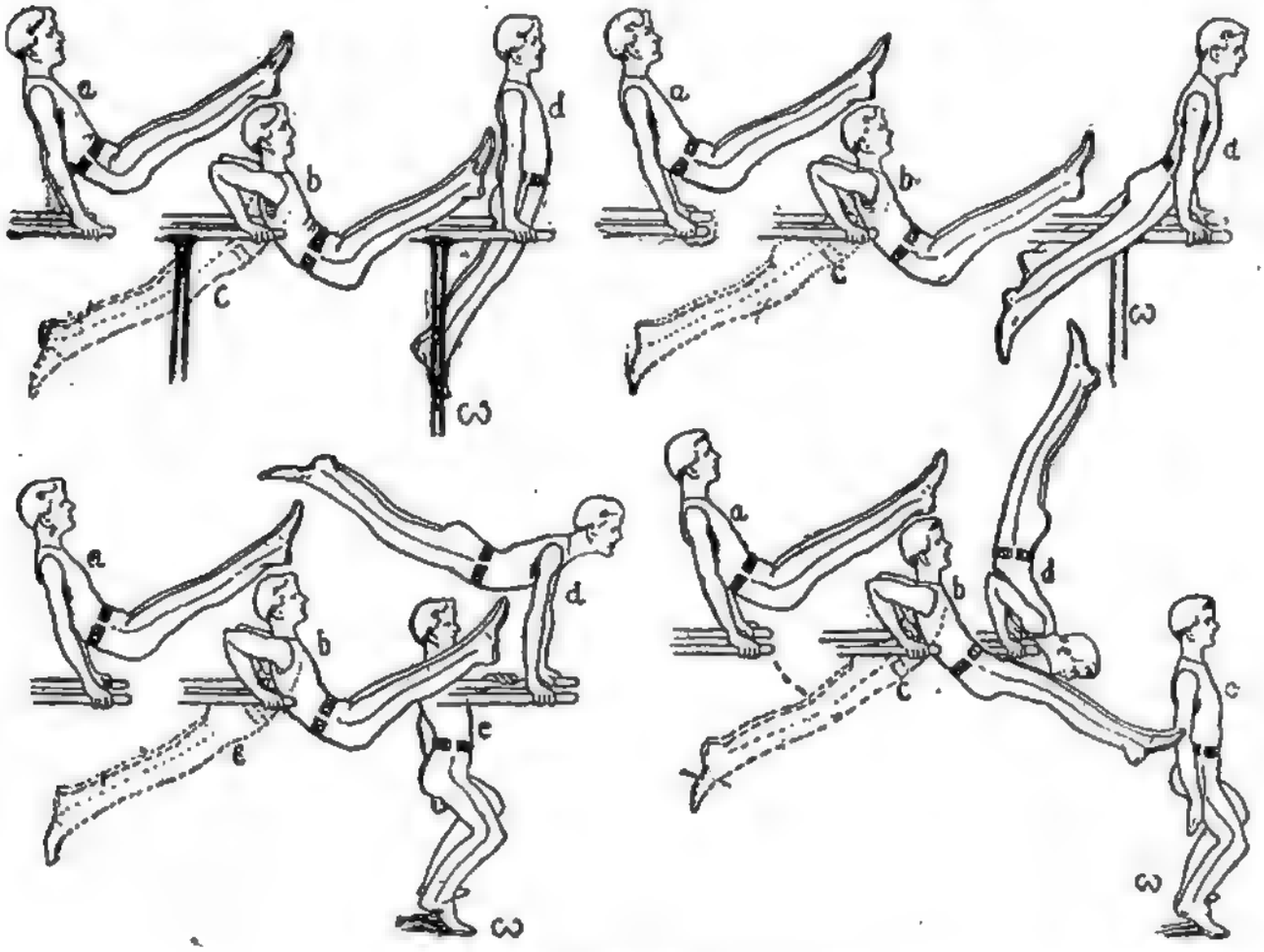
MILK SPREADS DISEASE.

At a recent meeting of the London County Council, Dr. Beaton, chairman of the Public Health Committee, said that there were over four million milch cows in the country, yielding 1,752,000,000 gallons of milk per year, for which the sum of £115,000,000 was paid. Two per cent. of these cows suffered from tuberculous udders, and that meant that 32,000,000 gallons of tuberculous milk were annually consumed by someone or other.

Milk, he added, was recognised as a factor in disease, and he remembered an outbreak of scarlet fever in Shoreditch, which spread to Bethnal Green, Finsbury, Islington, and St. Pancras, and which was traced to a small farm in Staffordshire, where the farmer, his wife, and daughter, were suffering from that disease.

——SWING EXERCISES ON PARALLEL BARS.——

By Albert B. Wegener, Author of Technique of Gymnastic Exercises.



Some New "Dipping" Exercises.

EXERCISES on the parallel bars in the bent arm rest may be performed in a series of progressive movements, but they should be given sparingly and only after the gymnast has a good development, and, what is more important, a well trained carriage. Some physical educators believe that no exercises should be given that even momentarily constrict the chest. Others believe that this is an extreme view, and they see value even in some exercises which if practised exclusively or largely would produce a bad carriage.

Exercises in the bent arm rest belong to this class. Since they produce a great tension upon the pectoral muscles these movements flatten and widen the thorax and are useful in cases of narrow deep chests or "pigeon breasts."

The series here outlined is but a portion of a graded classification of exercises.

There is no easier method of teaching than by illustrations. Especially is this true in gymnastics. Exercises must be demonstrated by competent skilled instructors. But few pupils have access to competent instruction. For this reason a book on gymnastics that illustrates the movements as shown here is of untold value to both instructors and pupils.

The series may be described as follows:—

Exercise 1. Backward Dip Swing to Rest.—From rest at far end facing out (fig. 1—d) swing; at end of front swing (fig. 1—a) flex arms into bent arm rest (fig. 1—b),—swing backward (fig. 1—c) and at end of back swing extend arms to rest (fig. 1—d).

Exercise 2.—Backward Dip Swing to Riding Seat. Same as the preceding, but more swing is required to get the legs above the bars so as to be able to come to riding seat back of hands.

Exercise 3.—Backward Dip Swing and Front Vault. Same as preceding, but the swing should be still greater so as to get well above the bar, then continue over one bar by means of the front vault. On the finish grasp the bar with the near hand.

This movement may be varied by making quarter, half, or three-fourths turns on the finish (Fig. 3).

Exercise 4.—Backward Dip Swing and Bent Arm Hand-Spring to Mat. The start is made as in the above but on the finish the arms are still flexed, body in extended position (fig 4—d), then finish with hand spring to mat (fig. 4—e).

The form, or attitude of the body in these movements is sufficiently illustrated in the cuts, and needs no further description. Too great care cannot be taken to observe this form in executing the movements.

Dust and Disease.

The Deadly Broom and Feather Duster.

THE importance of ventilation and of a constant supply of fresh air in living-rooms and wherever man abides, whether sleeping or waking, has often been insisted upon in these columns. Without air life is impossible, and unless that air be moderately pure, health cannot be maintained, although it is astonishing, and a proof of the wonderful adaptation of living beings to their environment, to note how great an amount of contamination of the air can be borne with seeming impunity. There are two forms of impurity in the air—gaseous and solid. The gases, those resulting from exhalations from the lungs, and in city houses from the little unnoticed leaks from the gas pipes and from defective plumbing, are the most injurious. For the removal of these, free ventilation from open windows and open fireplaces is most efficacious; but it is of little service in the removal of the other kind of impurity, that is to say, the solid particles of matter—dust—which are always floating in the air of houses as well as in that of the streets.

A BEAM OF SUNLIGHT

entering through a half-closed shutter makes visible this dust, and as one looks with startled eyes on the beam which lights up the floating particles, the wonder grows that the lungs are not made solid by this stream of dust flowing in with every breath. Fortunately the nose and the moist lining of the air-tubes are designed to filter the air by arresting these particles before they can enter the delicate air-chambers of the lungs. They do their work well, but not perfectly, and the greater the amount of dust the more they fail in their functions. Workmen engaged in dusty trades—carpet beaters, coal miners, potters, grinders, felt workers—often acquire disease of the lungs from the inhalation of dust. Dust particles are injurious, not only mechanically, but also and chiefly because they act as carriers of disease germs. Since it is impossible to remove dust entirely by ventilation, it is necessary to do what is practicable to prevent its dissemination through the air. Settled dust is ugly, but inoffensive. But when the well meaning but ignorant housewife flops it into the air with a feather duster, she only rouses the sleeping lion. Brooms and feather dusters are relics of barbarism, and should be banished. The damp cloth for furniture and the mop and carpet sweeper for floors, or best of all the vacuum process, are the modern civilised agents of cleanliness. These gather up the dust, and do not simply scatter it in the air, where it is invisible but pernicious.

SKIPPING FOR HEALTH.

SKIPPING-ROPE exercise for middle aged gentlemen affected with "liver" or indigestion is the latest fad. The London correspondent of the *Birmingham Gazette* asserts that this novel form of adult exercise is being used on rainy mornings as a substitute for the mile and a half run before breakfast, which has been prescribed by the West End physicians as a remedy for that condition of liver which in London is due to want of outdoor exercise and late hours, hard work and bad air. There are professional men and others who take their run in the park before breakfast every fine morning, and who bless the good physician who discovered this simple way of restoring health.

THE GOSPEL OF RECREATION.

By Sir J. Crichton Browne.

OVER-WORK and over-fatigue are the greatest dangers of the day, and the ease with which the latter is produced is, perhaps, one of the signs of our degeneracy. The tough old blades who did not know they had a liver or an appendix, and never went a mile from home unless to earn a little money, are all but extinct, and it is now the duty of every doctor to preach the gospel of recreation.

Over-work is the great cause of widespread physical degeneration and premature death. Even from a utilitarian point of view, we now know that the prolonged adult labour of these days does not give the best results in production. M. Riviére, in his report to the International Congress for the Protection of Workers in Paris, had shown that if people worked nine hours a day for a certain period and subsequently ten, eleven, twelve, thirteen, and fourteen hours, the production per hour was practically the same up to nine hours, but that as the length of the day was increased beyond that, the production diminished per hour. After eight or ten hours of work there was a progressive diminution in the daily production.

Many advances have been made in conditions of labour, but grave evils are still in existence. In the report of the Inspector of Factories for last year it is clear that a relapse into gross abuses would speedily occur were vigilance relaxed. We are told in that report of a large increase in the reports on over-time in 1905, which numbered 188,448, following on a large increase in 1904; of a large increase in the number of children and young persons presented for employment in factories; and of an increase of prosecutions and convictions for breaches of the law. Beyond the evils attendant on the undue prolongation of labour, and the pressure of it on the immature, there is another that has insinuated itself into our industries that is not referred to by the Inspector of Factories—which is known as "rushing" or "driving." It consists in forcing the pace of labour. Rushing is finding its way to Great Britain, and, according to Professor Oliver, of Newcastle, is beginning to show its injurious effects at our

WORKING THEIR WAY BACK TO HEALTH.

Wood Chopping at the largest Sanatorium in the world at Battle Creek, Michigan.

North-Eastern ports. Of the riveters, who are paid by the piece, it is said that they work so strenuously that at the end of a week of the usual number of working hours they are practically exhausted. They are compelled to take an extended rest, and many spend Saturday afternoons in bed.

The brain is connected with the muscles by the nerves, and it is a remarkable fact that the nerves are never tired any more than is a telegraph wire. Fatigue is unknown to them, and no amount of use diminishes their conductivity so long as their structural integrity is maintained. But the brain, to and from which these nerves carry, is liable to fatigue, and succumbs to it much more readily than do the muscles, fatigue in it being induced in the same way as in the muscles by a too profuse expenditure of its capital, or by the weakening and obstructing effects of its waste products. And the effects of fatigue, through excessive expenditure and detention of toxic products on the constituents of the brain, can actually be seen.

The Sovereign Remedy.

In animals with alternate periods of activity and repose well marked differences are found between the nerve cells of one killed in the morning after a night's rest, and another killed in the evening after a day of exercise. In the latter, the nerve cells are visibly shrunken, and this condition has been demonstrated in the English sparrow, a very active and perky little bird, in the swallow, that is certainly not sluggish, and in the honey-bee, that is proverbially busy. If two nerve ganglia are put under the microscope, and the one is left at rest, while the other is kept electrically stimulated, progressive changes will be noticed in the latter which have no counterpart in the former.

The sovereign remedy for fatigue is repose. This gives time for re-adjustment, for the renewal of stored up energy, and for the removal to the destructor of the harmful débris of the dustbin.

As to the acute effects of fatigue, Mosso stated that at the season of migration in March large numbers of quails were found dead on the Italian coast, having succumbed to the fatigue of their flight from Africa. They were plump and well nourished, and perished from cerebral anæmia. The history of the forced marches of armies furnishes striking pictures of the havoc wrought by over-fatigue on bodies of men. In 1778 the Prussian army had a forced march of four days to Dresden in hot weather, each soldier carrying 80 lbs. The soldiers looked as if they had aged ten years. Almost at every step lay a fainting man, and entire troops fell by the roadside. The horses also were ruined by the march; almost every hundred steps lay a dead pack horse. The army arrived exhausted even to death. "Coup de soleil" was often merely fatigue-poisoning.

This is a lugubrious age. The temperament of the times is bilious. Dr. Clouston has repeatedly pointed out that the type of insanity is changing, and that instead of the noisy mania, so common twenty or thirty years ago, we have now silent melancholia. He attributes this to the repeated epidemics of influenza from which we have suffered. No doubt he is correct, but wider causes have also probably been at work to produce a general lowering of nerve-tone. Industrialism, education, and the decisive changes that have taken place in our habits of life must not be forgotten.

A Word Once Unknown.

Professor James, of Harvard, affirms that Americans show in their countenances intensity, rapidity, vivacity and a "bottled lightning" expression, very different from the stolid cheeks, cod-fish eyes, and slow, inanimate demeanour seen in the British Isles. Well, notwithstanding our cod-fish eyes, we have in this country now an increase of nervousness, and the word neurasthenia, unknown to Webster, is daily on every medical man's lips, while there is much of it that never came under medical cognisance. Innumerable hard workers suffer in the course of their work from nervous depression in its Protean shapes —from "morning tire," as it is termed, from morbid irritability, from listlessness and inability to fix attention, from apathy and languor, from anomalous sensations and strange fancies, from headaches and prostration, from tremors

and baseless apprehensions, from despondency and weariness of life. These, when they come during arduous work, are signs that recreation is necessary.

The essence of recreation is change and spontaneity. It is the antithesis of *travaux forces*. It can be but an interlude in serious performance. Uninterrupted recreation becomes irksome toil. We discover in recreation elements of different kinds—sensuous, imaginative, an element of curiosity, an element of skill, an element of chance, and an element of personal display.

There are grounds for believing that the love of Nature, and an appreciation of its salving power are increasing amongst the working and middle classes, while it is dying out amongst the affluent. The latter still gather in choice regions of natural beauty, but they approach them from the big hotel or bathing establishment or saline spring point of view, and not from the Wordsworthian. Absorbed in bridge and golf, "the harvest of the quiet eye" no longer delights them. Rapid locomotion is the craze, and that involves blindness to natural beauty, motoring being in relation to scenery what bolting is in relation to food. The flavour is missed in both cases and indigestion results, mental dyspepsia in one case, stomachic dyspepsia in the other. The confirmed motorist must become sluggish in intellect and excitable and jumpy in temper, with an incessant craving for stronger and still stronger condiments. Motoring at its worst tends towards homicidal mania.

With all its faults the newspaper is one of the bulwarks of sanity in the present epoch. It is the antidote to corroding egotism; it gives a world-wide horizon to the purblind and short-sighted. It thrills the torpid nerves like a Faradaic current; it plays in turn on the whole keyboard of human temperament. It is real and earnest in its tragedy and comedy, while the novel is only make-believe.

Many a man has been saved from melancholy or fatuity by his daily paper, which supplies snacks of biography in the form of gossip, manufactures heroes by the dozen, furnishes easily digestible intellectual pabulum, discounts megalomania, cheers up pessimism, feeds in its advertisements the dreams of avarice, is occasionally logical, and maintains a high ethical standard. "Suppress your newspaper and you must enlarge your lunatic asylums."

The element of chance and dubiety that enters into exhibitions of skill, sports, and games gives zest to many kinds of recreations, being in contrast with sameness and familiarity of work. That element was harmless until it was united with greed and rapacity, when it became poisonous, in gambling. Recreation then ceased to be beneficent and became vicious.

There may have been times when reckless gaming among the rich was more common than it is to-day; but never was betting so widely diffused among the people. The effects of a vice were traceable in the faces of its victims. Bulwer Lytton, when in Paris as a youth, went to one of the gaming houses that were in fashion at the time, and played far more heavily than he could afford and won largely. The day was dawning when he reached his own rooms. His writing desk stood on a console in front of the mirror, and in pausing over it to lock up his winnings he was startled and shocked by the reflection of his own face in the glass. His countenance was not merely haggard; it had a sinister expression. He had risked far more than he could afford; his gains had been great. But the ignoble emotions of the night had left their lingering traces on his face, and as he caught sight of his own features still working and gleaming with vicious excitement, he for the first time despised himself. It was then he formed a resolution that, be the circumstances of his future life what they might, no inducement of greed or need should tempt him to gamble again. He kept his resolution.

THE PERFECT DIET.

Bread and butter is the food for muscular work, according to Dr. E. F. Willoughby. The perfect diet for those who are neither faddists nor teetotallers is 8 oz. of cooked meat, 24 oz. of bread, 8 oz. of potatoes, 2 oz. of cheese, 2 oz. of bacon, 1 oz. of butter, half a pint of milk, and one pint of beer per diem. Green foods are desirable additions to any diet.

AUSTRIA IN LONDON.

Where to Spend a Healthful and Pleasing Afternoon.

THE average Londoner rarely realises his good fortune in the matter of recreation and amusement. Compared with the toiling multitudes of the large manufacturing cities, he is, indeed, a much pampered individual. The London County Council alone provides him with a delectable fund of heathy and economical recreations. It preserves in his interests numerous beautiful open air spaces and parks. In the summer evenings it enables him to sit in the open air and listen to the compositions of the greatest masters of music. He can sail up the river and enjoy the breezes of "London river" for a few pence. And the electric trams of the Council will, for a similarly small sum, land him in a few moments in the midst of delightful sylvan scenery. Lucky Londoner, well might your less fortunate provincial relations envy you!

In addition to the County Council, numerous private enterprises spend thousands annually to lighten the lot of the London worker. Some of the amusements provided, however, are by no means conducive to the improvement of health and physique. How vastly different, for instance, it is to sit and sweat in the tainted atmosphere of the crowded, ill-ventilated theatre or music-hall than to spend a really delicious afternoon enjoying the æsthetic delights of the Austrian Exhibition at Earl's Court. Such an afternoon is a real holiday, resting and refreshing both body and mind, giving sane and rational pleasure to every sense, and renewing the energies that the cares and worries of the business day have sorely depleted. Here one is suddenly transferred, as it were by some magician's wand, to a far-off country, with the spice of novelty surrounding everything. Let us enter the gates of this magician's cave.

Having made our escape from the deafening turmoil of the giant city, we enter into the charming gardens of Earl's Court, where the buildings containing the Austrian Exhibition are established. Here the masterful brushes of the Brothers Kautzky and Rottonara have introduced green lawns, mountains in woodland, and delightful gardens, and we find ourselves suddenly carried into wonderful suburbs of the Imperial and residential city of Vienna; the historic Kahlenberg appears before our eyes; the Imperial Summer Palace of Schoenbrunn calls our attention; and the magnificent panorama of the Semmering makes us long for the invigorating air of the mountains. Yet these scenes are only a foretaste, a mere introduction to the surprise which awaits us. In the Empress Hall the artists have produced a work by a clever combination of nature and art, which suddenly takes visitors by magic into the Tyrol. Every object, every scene, is true to reality. In addition to the work created by the artists, the Committee have arranged that the Village should also be peopled by natives of the Tyrol, so that the visitor should not only become acquainted with Tyrolese landscapes as if carried over there on the mantle of Mephisto, but that he should also have before his eyes real Tyrolese life; be able to admire Tyrolese art and work; be cheered with Tyrolese music and singing; be refreshed with Tyrolese milk, and in short, that he should get the impression as thoroughly as possible that he was in the Tyrol itself.

THE SALT MINE.

Solid rock blasted into a tunnel lets you into the openings of the earth. Trolleys carry their human freight rapidly along, under the supervision of guides, into the mining workings. By flights of steps or slides the miners reach the lower depth, where an excavation in the deep bed of rock salt is from time to time filled with the purest water. This is allowed to remain for from four to six weeks, when it is drawn off thoroughly

saturated with brine and the salt extracted. After this brief technical explanation necessary for the comprehension of what the visitor sees, the guide meets him at the end of his trolley trip and conducts him through the workings, up flights of steps in the solid rock salt. From here a slide descends, and the miners, wearing large leather flaps, seat themselves on a toboggan slope and slip down to their tunnels. Visitors may follow their example, or, if diffident, walk down the steps into the principal cave where the salt is being worked. Peering down one sees the miners at work, and in the background the altar cut in the hard salt testifies to the proverbial piety of the Austrians. By winding passages an ascent, necessitated by the various workings, is negotiated, and at the end the passage slips or steps as before into the very bowels of the earth where the Brine Lake is.

ROYAL ART GALLERIES.

Here is all that is best representative and characteristic of the work of Austrian artists. The special catalogue and articles deal with this most important section minutely. This is the first time Austria has adequately shown to the British public what it can produce in Art. The galleries are divided into ten sections, according to their school and associations.

THE PRATER.

In this typical Austrian merry-making ground a diversity of amusement reigns all round. Beginning with the Pagoda, an Eastern Enigma, the Temple of a 1000 Eyes, Tyrol Shooting Gallery, Herr Otto's Performing Cats, the Human Weird Flight, entice you. The Prater Wursted Man is a feature in himself, while the Flying Fish, Electric Targets lead to the PRATER THEATRE occupied by Willards' famous Mannikins from Vienna. "PEEPS INTO AUSTRIA," by the noted "Skymark," of London—the GREAT WHEEL—give a rest in preparation for the HELTER SKELTER LIGHTHOUSE, which fully justifies its title. The many other attractions are more or less familiar. On the Lake are the quaint boats from the Tyrol, rowed by native oarsmen and oarswomen wearing picturesque attire and with peculiarly shaped paddles.

The magnificent panorama shown in the huge octagonal building in the Western Gardens strikingly depicts the famous fight by Tyrolese Volunteers in defence of their country against French and Bavarian invaders on August 13th, 1809. It is presumed to be viewed by the spectator from a beautifully wooded crest named the Isel Mountain, which rises to the south of Innsbrück, Tyrol's capital. Upon this noted height a grateful country has erected a monument to the hero, ANDREAS HOFER, who, a native of the Passeyer Valley, so victoriously led the defenders against the combined enemy.

ONLY TWO DAYS MORE.

The Exhibition is an imposing display of all that is excellent in Austrian Art, manufacture and product, and its promoters, it is pleasing to know, have earned a substantial financial reward for their enterprise and trouble.

The Exhibition will remain open until October 6th, and all those who have not taken the opportunity to visit the Court should do so before the Exhibition closes.

TESTS FOR TINNED MEAT.

THE can of good canned meat should not bulge—that is, neither the top nor the bottom should be convex, nor should its surface, top, bottom, or sides show what are called in the trade "blisters." When the tin is opened no gas should exude, nor should any gas be capable of being extracted by any of the apparatuses designed for this purpose. Any jelly surrounding the meat should be solid, and not liquid. The re-action of canned meat is usually acid, but it may be alkaline without necessarily being decomposed, especially in the case of fish. This is important, because metallic contaminations of the tinned contents is more likely to occur when the re-action is alkaline. The essential difference between canned or preserved (sterilised) meat and the same meat sold by a butcher is that weight for weight the former is more profitable than the latter. If we take, for instance, beef, we find that ordinarily speaking fresh meat as sold by the butcher contains approximately 72 per cent. of water, 20 per cent. of proteid, 5 per cent. of fat, and 1.14 per cent. of ash. In the case of sterilised meat an average composition is the following: Water, 50 per cent. fat 10 per cent., proteids 29 per cent. Hence, there is, roughly speaking, 25 per cent. less water in canned meat than in fresh meat. A further difference is that in canned or preserved meat there is practically no waste material: bone, gristle, etc., having been removed.—*The Hospital.*

PHYSICAL CULTURE.

Causes which have Helped the Movement.

WHETHER the growth of the physical development movement is due to the recent outcry of physical deterioration and the desire to mend this lamentable state of affairs, to the attractions of this particular form of recreation, or to that inherent English pride which causes a man to find pleasure in the strength of his own arm, is a question which cannot easily be answered. Certain it is that the movement has grown, and that it is still growing; that it has found favour in our schools, and is practised with some show of assiduity in private homes.

OLD AND NEW METHODS.

It is worthy of note, too, that as the movement has developed so the system of physical culture has become revolutionised. Many of the old methods have been discarded as almost useless, and in their places have sprung up methods which are no less striking for their variety than for their simplicity. It would not, it is obvious, be correct to say that the dumb-bells and Indian clubs have been cast aside, but it is safe to say that they no longer occupy the position of importance which they used to hold in the physical culture system as it was practised a few years ago. We now exercise with elastic bands, called chest expanders, or go through some of the apparently simple movements recommended by experts; our children at school go through various evolutions, "free exercises" and "model courses." And all this to the one end that we may stay the physical rot which we are assured has set in, and entitle us again to lay claim to that valuable asset of stamina which alone can make and preserve us a powerful nation. In this it will be generally acknowledged we act wisely, even though we may have the assurance of St. Matthew that no one by taking thought can add one cubit unto his stature. But as concerning this latter assertion, there are those who, basing their declaration upon practical experience, assert that it is possible, by taking thought and following a certain system of exercise, to add very materially to one's stature. And even if this end were unattainable to those who sought to accomplish it by diligent application to the given rules, the good results which accrue to future generations by the physical fitness of the present should in itself be sufficient recompense for any momentary non-success. It is to be feared, however, that such philanthropic considerations do not weigh with the crowd, and that outside the schools the physical culture movement has little or no connection with the cry of physical deterioration.

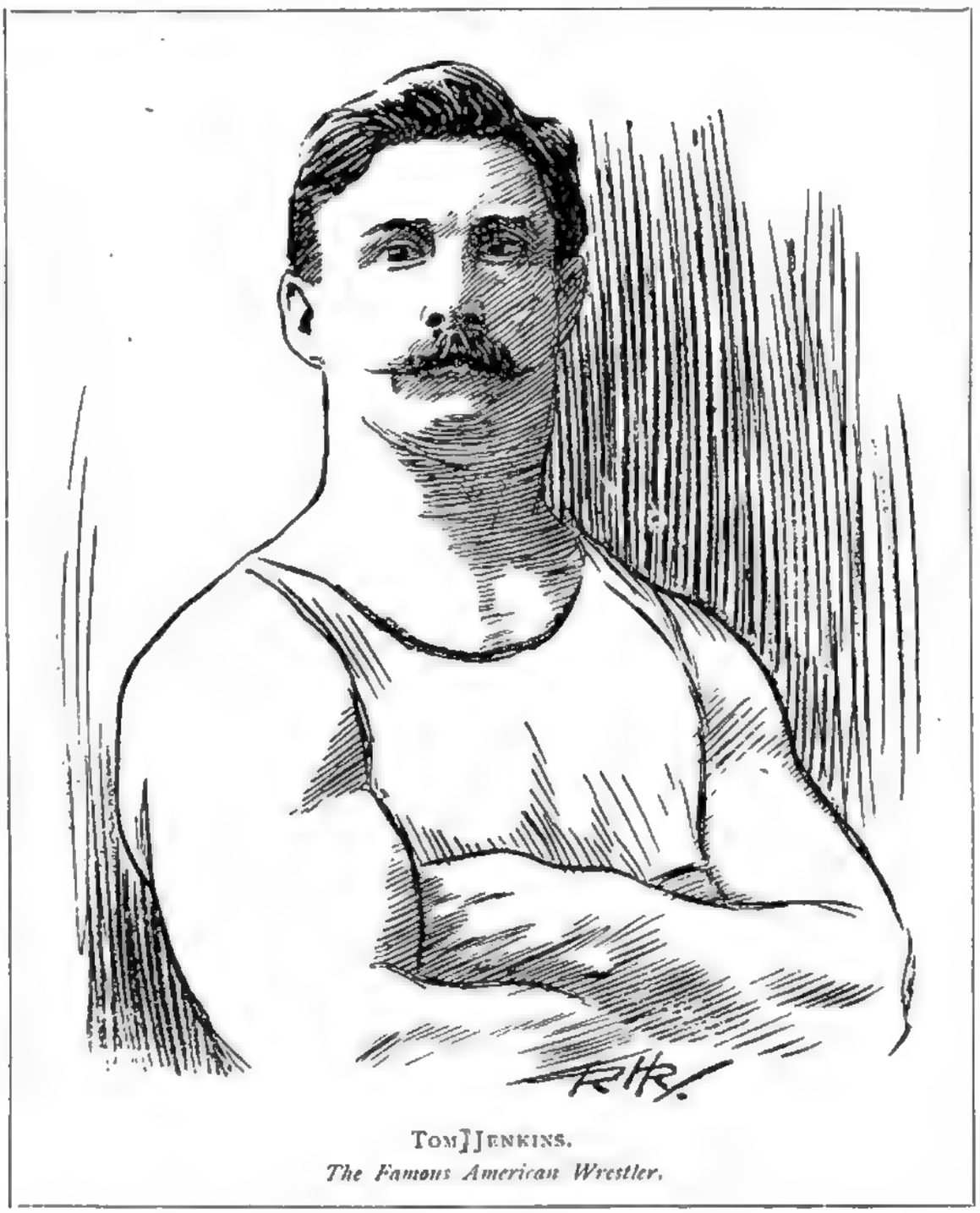
PHYSICAL CULTURE IN THE SCHOOLS.

There can be no sort of doubt, however, that the movement owed, if not its inception, at all events its more rigid application in the schools, by public attention being called to physical deterioration. The importance of physical exercise for the children was then emphasised, and attention has since been more diligently turned to its application in our public elementary schools. This is to be the more welcomed when it is remembered that according to the evidence given before the Inter-departmental Committee, physical deterioration is almost entirely confined to the class whose children attend the public elementary schools, namely, to the artisan and lower classes. There seems to be a general impression that there is an all-round physical deterioration, and that all classes of society are under the same fearful bane. This, fortunately, is not the case, although on the other hand we have to face the fact that owing to the diminishing birth-rate in the most desirable classes, from the point of view of good citizenship, the "unfit" and "incapable" are increasing at a greater rate than the "fit."

PHYSICAL FITNESS IN SPORT.

Amongst adults physical culture has gained in popularity because it has come to be more generally regarded as a help towards the promotion of efficiency in

every department of life. As to the benefits of physical culture to the every-day man of business, we need not here stop to discuss, for the old axiom of the survival of the fittest must, of necessity, make those benefits self-evident. What we may pause to consider is what at first may appear to be more self-evident, namely, the more general adoption of physical culture by those who desire to gain proficiency in any particular line of sport. There was a time, and not so very long ago, when a person who desired to become, say, a first class tennis player, adopted the method of playing tennis day in and day out until eventually by sheer practice he acquired a considerable measure of proficiency. Now, however, the sportsman divides his attention to practice of the game in which he desires to excel, and physical exercise. This method has, of course, long been adopted



TOM] JENKINS.
The Famous American Wrestler.

by footballers, because it was obvious that their proficiency depended almost entirely on their physical fitness. In other games, however, this was not the case, and it is only during recent years that we have come to regard physical culture as an element of success in sport. Mere ability to play is not sufficient, says the *Midland Evening News*, there must be physical fitness other than that promoted by the practice of the one particular game. This applies to all games, to cricket, golf, tennis, as likewise to bowls, which latter pastime some of the younger sportsmen refer to as an "old man's game," than which one could scarcely expect a more gratuitous insult.

We have referred to two of the elements of success in sport, namely, proficiency in playing, and physical fitness. There is a third element, namely, the manner of diet. As physical fitness promotes proficiency in playing, so in like manner does the manner of diet contribute to physical fitness. Very careful attention should, therefore, be paid to this, for without it the good wrought by diligent application in respect of the two first-named may be wholly and completely nullified. The race is not always to the swift, or the battle to the strong, as those who are foolish enough to eat pastry immediately prior to a contest will very soon learn. In this matter of diet no stringent rules can be laid down, for what is one man's food may virtually be another man's poison. It does not necessarily follow that what is sauce for the goose is also sauce for the gander. It is, therefore, only by diligent observation that one can hope to arrive at a right conclusion in regard to the important matter of dietary. To simply follow the instincts of the palate is disastrous to those who would win success in the world of sport.

How to Attain and Retain Good Health.

Study and Observe Simple Natural Laws.

AN abundance of pure, fresh air, proper exercise, and plain and nutritious food are the essential conditions of good health, says William S. Birge, M.D., in *Health*, N.Y. When it so occurs that, by reason of the occupation or the environment of the individual, these conditions cannot be met, the next thing of importance is to supply the lack as nearly as possible, and keep as nearly to the requirements of good health as circumstances will allow. Good ventilation is possible in almost all establishments. It is nonsense to say that bad air is a necessity. It may be less expensive to keep employees in a hot and stifling atmosphere, but this certainly is not a condition without remedy. A fan and ventilating pipe ought to be one of the absolutely required provisions of all work-rooms where many people are compelled to remain for any length of time. It costs something, to be sure, but that should not be allowed to count, and health officers ought to have the right and the disposition to enforce the providing of such a means of supplying fresh air.

Given a sufficiency of this necessary element, and the careful student of proper conditions has a long score in his favour on the side of health.

MANY PEOPLE

do not seem to realise that persistent and industrious breathing, making a business of it, so to speak, for a few moments every day, will do more toward clearing out the system than half of the drugs and nostrums that doctors are fond of prescribing and that chemists love to compound. This, with the exercise that one is likely to get in going and coming from the daily task, may, if carefully attended to, furnish the means for the consumption of the waste matter of the system, thereby giving the vital organs the strength and freedom to perform their several offices in the most acceptable manner. Where the conditions of the individual are such that active exercise is out of the question, massage may be so arranged as to supply this most important demand. There is nothing in the whole range of the remedial conditions that can be used to better advantage than this. It is simply exercising the muscles by proxy. That one may take exercise without leaving the chair or bed is a fact not sufficiently appreciated by people in poor health.

A child who had been an invalid from

her cradle was restored to health by a little swing put up in her room. Her feet, ankles, and legs were too weak to bear her weight. There was no development of the muscles, and the conditions were such that entire helplessness seemed to stare her in the face.

THIS SWING

was so arranged that by a very little effort she could push herself into motion. The idea was novel, and pleased her greatly. At first she could move but a little way, but she soon became so interested in this amusement that she exerted all of her strength to move her weak and almost useless feet. Day after day she tried very hard, having heard someone say that she would never be able to swing any distance. She therefore made up her mind, with the persistence that frequently accompanies such temperaments, that she would not stop until she could touch her toes to the ceiling. Hour after hour she worked, accomplishing but little at a time, until almost before her family were aware, the colour came into her face, her muscles began to develop, appetite increased, the circulation was restored, and the nerves became steady. She now walks about the world an extremely comfortable, well developed and healthy young woman, a monument to the wit and wisdom of some persons who made up their minds that it was possible to amuse people into health and bring about normal conditions without the expense and labour of the massage operator or the complicated, and to them, impossible, processes of a course of treatment in a hospital.

IT IS STATED

by an eminent physician that if every child had a swing in its play-room, so arranged that it could, by pushing with its feet, get itself in motion, it would develop muscle, strength, and symmetry in less time, and in a more agreeable fashion, than could be secured in any other way. Care must always be taken to fasten the child so that it is impossible for it to fall, and to let it hold on by the ropes, thus exercising its arms, neck, and shoulders, and the pushing with the feet will do the rest. When this child's treatment was going on, it was warmly dressed, as though for out-of-door exercise, and the windows thrown wide open in the severest weather.

Ingenious mothers, guardians, and physicians might learn many valuable lessons from some of these household experiments; but one thing must always be understood, that plenty of fresh air and proper clothing are amongst the most important requirements of such an undertaking.

What Constitutes and Causes Insanity.

Mental Disease is the Result of Physical Conditions.

"NOBODY is wholly sane and normal as measured by inflexible rule. Insanity may only be determined by comparing one with himself or herself," thus says Dr. C. F. Macdonald.

Let it be strongly emphasised, continues our authority, that there is no common standard of sanity departure from which constitutes insanity, as otherwise all mankind would be more or less insane. No two individuals think and feel and act precisely alike. Hence, no man is insane because he differs mentally from other men. A thought expressed in action by one person may be wholly rational, whereas the same thought expressed in the same action by another person would argue insanity. In other words, every individual has his own standard of sanity, and it is only when he differs from himself, departs from his normal mental state, or is in a state of mental alibi, that he may be adjudged insane.

When a grave crime is committed and insanity is advanced in defence of the act how is the mentality of the prisoner determined? We must exclude all other persons from consideration and compare the condition in which we find him at the time of examination—as indicated by his conduct and speech as well as physical condition, with his normal mental status as determined by heredity, birth, mental development, disposition, and temperament, affections, education, moral sentiments, habits and environment, prior to the commission of the crime. For

instance, a person of excitable temperament may exhibit from trivial causes mental exaltation or depression which, up to a certain degree, would be clearly normal, whereas similar manifestations in another person of different temperament, organisation and habit would convict him of lunacy. Nor is it always possible to say just where sanity ends and insanity begins, so gradually does one state merge into the other. Insanity does not suddenly enter the system by one door while health departs by another; and while in rare instances the disease may make a swift onset, its usual approach is gradual and may cover a period of weeks or months or years before actual aberration is reached.

Pronounced superstition, loss of memory, eccentricities and so on argue more or less mental impairment and may be predisposing causes, but do not in themselves argue dementia. Just because you are superstitious, or have disturbing nightmares or a hysterical fear of animals, or become dizzy on the brink of a chasm, do not regard yourself as in danger of dementia. At the same time, if the symptoms are agitated and violent you should consult a physician.

Prominent among the premonitory symptoms of insanity are physical disturbances, morbid emotional manifestations and marked changes in the mental characteristics. If the tendency is to mental exaltation or mania, the emotional changes usually take the form of unnatural buoyancy, loquacity, undue levity and morbidly quickened mental operations. If the tendency is to mental depression or melancholia, there are gloomy forebodings, morbid introspection, senseless self-condemnation, aversion to friends, morbid suspiciousness, irritability and frequently a vague sense of impending evil. Marked change of character is seldom wanting in this stage of the disease.

Thus, the devout person may become profane; the refined, immodest; the staid individual, capricious and vacillating; the social, unsocial; the good tempered, irascible; the temperate, intemperate, and the level-headed business man may embark in quixotic enterprises.

Insanity is rarely due to a single cause. Careful investigation will disclose a combination of causes producing mal-nutrition of the brain, which, after all, is the immediate cause of all insanities. In other words, any disease which impairs the bodily nutrition or alters the quality and quantity of blood supply or seriously disturbs the nervous system is capable of becoming either a predisposing or exciting cause of insanity.

In diagnosing insanity it is important to reckon certain negative symptoms, as reticence, obstinacy, sullenness, or stupidity, when such condition is not natural to the individual. Note should be taken of the facial expression—the facial contrast in mania and melancholia being in itself a lesson in diagnosis—the expression of the eyes and their pupillary re-actions, the speech, writing, motor functions, and so on, any of which may indicate mental disease.

It must be borne in mind, too, that a patient generally makes unreliable, misleading statements regarding him or herself, even though in other respects he or she may be perfectly truthful. Insane persons declare themselves sane almost as a rule, the truth or falsity of certain statements made by the insane being only determined by evidence from other sources. On the other hand, many hallucinations expressed by the insane are so manifestly irrational as to need no further corroboration; as, for instance, when a man declares he is a king or the Saviour, or that his legs are made of glass and he refuses to walk for fear of breaking them.

Among our criminal insane a large portion are paranoiacs, or, in other words, victims of delusional insanity. Many victims of this mental derangement, contrary to popular belief, possess a perfectly clear knowledge of right and wrong in the abstract, and also comprehend abstractly the nature and legal consequences of acts similar to those which they have committed. Your paranoiac is prone to premise falsely and to morbidly misinterpret the conduct, attitude, and motives of those about him, and while he often reasons logically he reasons from wrong premises, as a sane person would not do.

SHOULD WE EAT COOKED FOODS?

By Susanna W. Dodds, M.D.

IT is an opinion very generally held, correctly, I think, that foods cooked in hot or superheated oils, as "fried potatoes," fried eggs, and the like, are apt to cause trouble in the stomach. The writer was once made very sick by eating fried onions; indigestion resulted, and there was nausea with vomiting. The stomach ejected the offending substance, and no very serious illness followed.

But the question arises as to why foods that are prepared by cooking them in hot fats should be rendered unwholesome. Horace Mann once stated to the students in Antioch College that few things were more indigestible than superheated butter. No one disputed the statement, though I doubt if any of his hearers had studied the subject from a scientific standpoint. In fact, chemistry at that time did not form so important a factor in the preparation of foods as it does now.

THAT VERY ORIGINAL WRITER,

Gustav Schlickeysen, in his excellent work on "Fruit and Bread," has emphatically declared that cooking is in and of itself a deteriorating process; that as soon as heat is applied to those organic structures used as food the substances are so changed in character that their nutritive value is impaired; and that the reason why cooking is so generally resorted to among civilised people is because, owing to long continued violations of law, the human stomach has lost its power to digest foods properly in their natural state. In other words, the habit of cooking nearly everything we eat has become so universal that the stomach is weakened; to such a degree, indeed, that foods once easily digested and assimilated as Nature furnishes them, must have their structures partially broken down by cooking before the digestive organs are able to handle them. He claims that these foods are by such process devitalised, to a certain extent; and that the tissues built out of them are therefore inferior in quality.

A. T. YEOMANS.

The well known cyclist and walker.

To take a familiar illustration, such articles as radishes, celery, lettuce, and the like, are not improved by cooking; they are more appetising in the raw state, and they seem to subserve the interests of the vital economy very much better. Even cabbage, which is usually prepared by cooking, is preferred by many eaten raw, either with or without a simple dressing. In Scotland, turnips are often peeled and eaten raw, as you would an apple; though some individuals prefer to have them scraped. Peas, young and tender, are very much sweeter before cooking than afterward.

MANY OF THE FRUITS,

as ripe apples, peaches, pears, etc., are far more delicious eaten in the raw state. This is particularly true of some of the small fruits, as strawberries, raspberries, and currants. Certain varieties of cherries, too, have a much finer flavour raw than cooked; and the citric acid fruits as oranges, grape fruit, etc., do not require the addition of heat to make them palatable.

Now, if heat so changes the molecular arrangement in certain of our food products as to render them comparatively insipid, what about the changes that take place in the various fats or oils? Take butter, for example; once that is made very hot, or even melted, no amount of cooling will ever restore it to its original flavour. Some alteration has taken place in its structure, by which the digestive and other qualities of the article are impaired.

But suppose instead of merely reducing the butter to a fluid state we continue to increase the temperature, heating the oil to a high degree. It changes in colour and taste; and if we raise the heat still higher, burning it up, so to speak, the volatile oils escape, the butyric acid will be decomposed, and only a residue of black carbonaceous matter is left, the latter being utterly unfit for food.

WHERE THE STOMACH HAS ALREADY BEEN WEAKENED,

through erroneous dietetic habits or otherwise, its owner instinctively rejects "fried dishes" of whatever kind. And if beef or mutton has been made very hot in roasting the outside cuts (often saturated with hot grease) will be avoided. Or if gravies are made with meat juices, and the superheated oils are left floating on the top, these, too, will give trouble. Indeed, fat meats and oils of various kinds are far more easily digested taken in the raw state, or with only a moderate degree of cooking, than when made very hot in a skillet or oven.

Another thing: cold meats, if warmed over, should never be superheated; they are rendered indigestible, and are also greatly impaired in flavour. The same is true of vegetables, especially the more fragile kinds, as cabbage, cauliflower, spinach, asparagus, etc. Cooking, if resorted to in the preparation of foods, should be done so as to avoid an intense heat. Ripe fruits, as apples, peaches pears, etc., these being "sun cooked," are best when matured in weather that is not too hot. Fruits that are scorched or baked by a hot sun are in a measure spoiled; the vital processes have been interfered with, and the fine flavours are lost.

SUBSTANCES IN WHICH ALBUMEN LARGELY ABOUNDS

are particularly susceptible to the varying degrees of heat. Foods in which eggs are used, as custards and the like, require the greatest care in cooking. A very moderate degree of heat should be applied; hence the rule often given in cook-books to set the custard in a pan of boiling water while baking it and to regulate the heat so that the custard when done will be in a jelly. One of the best bread-makers the writer ever knew baked her loaves in an oven that was many degrees cooler than is usually employed. Those who are fond of meats, particularly lamb and mutton, will note the superiority in flavour if the meat is cooked in a little water and over a very slow fire, until it is thoroughly tender. The small fruits, too, as strawberries, raspberries, cherries, etc., should, if cooked at all, other than with the sun, be stewed slowly, and not too long.

COOKING IS REALLY A FINE ART,

and one that few thoroughly understand. Certain it is that the application of heat to food products is a subject that should be scientifically studied. Too much heat spoils things, and this is true, not only in regard to fruits and vegetables, but in the preparation of foods with oils, whether derived from nuts, grains or vegetables, or from animal products. In the usual methods of frying, the fats employed are not only superheated, but sometimes scorched, thus changing their molecular arrangement in a marked degree.

MADNESS IN THE CIGARETTE.

Dr. Forbes Winslow, in an interview with a *Daily Chronicle* representative a few days ago, pointed out that the London County Council Asylums Report shows that more than twenty-five per cent. of the whole of lunacy cases is due to drink. "I can prove by figures," he added, "that lunacy is on the increase, and if we go on as we are going now the days are bound to come when we shall have more insane than sane people. Cigarette smoking is one of the chief causes of insanity; I cannot understand why it is not in the tabulated form of causes. I think that half the lunatics at present in the asylums could be managed in outside establishments. I have always advocated the treatment of incipient and acute cases, in the early stages, in what I call 'half way' houses, where they could be treated and perhaps cured before they are for ever branded as lunatics.

RUGBY IN NEW ZEALAND.

Famous "All Blacks" write Book on the Subject.

A VOLUME on Rugby football, by D. Gallaher and W. J. Stead, captain and vice-captain respectively of the New Zealand team that came to Britain and conquered, was sure to be interesting, but few could have completely anticipated the thoroughness, brightness, and instructiveness that mark "The Complete Rugby Footballer." So many phases of the game in general, and the game as it applies to New Zealand in particular, are opened out to the reader in delightfully entertaining manner that the work must be placed among the foremost of its kind. In the past we have wondered why this undoubted superiority of the New Zealand Rugby player was, and the joint authors attribute it to the fact that—

> It happens in other departments of life that a young Colony, beginning things afresh, infuses more energy and thoroughness into its business, and displays a greater fertility of invention and resource than its parent; and whilst in the matter of its football New Zealand fully and gratefully recognises its debt to the Mother Country, and admires the spirit of progress which has animated some sections of players there, it thinks that, as the natural result of its semi-independence, it has possibly displayed a greater keenness in perfecting the science of the game.

This, the latest criticism of England's standstill policy with regard to her football, is none the less potent for being somewhat indirect. And yet football started in New Zealand much after the barbaric, kick-whom-you-can, stop-them-at-any-cost (to them) method which marked the pastime in its infancy here. The authors in fact tell of a challenge issued by some Irish miners in Auckland to play the Auckland side for £200, each team to have 100 players. The challenge was issued as recently as 1868, but was not accepted.

TUITION OF SCHOOLBOYS.

The government of the game as practised in New Zealand is well worth our study. The writers of this volume are proud of what they call their "most perfect" organisation, and inasmuch as one of the main things taken into consideration is the culture and encouragement of schoolboys, they have indeed a fine foundation to their methods. The initiation of our schoolboys into the mysteries and sciences of Rugby football became a matter for earnest discussion towards the close of last season, so that it may be profitable to learn of, even if it is not practicable to follow out, the mode of procedure adopted in New Zealand. Our authors write:

> Thus, there is a Public Schools Union, with sixteen of the elementary schools affiliated to it, and there is also a Secondary Schools Union, consisting of five of the grammar schools and colleges that are situated in the capital. The Auckland Union offers cups for competition by these schoolboy teams. . . Here at these schools we have the New Zealand footballer in his rawest and most elementary stage; but it commonly happens that before his schooldays are over he is a player of no small parts. Clubs are not organised promiscuously in New Zealand as they are in Britain. . . . The Union decides what clubs there shall be, and supervises the management. In doing so it particularly desires to ensure the thoroughness and effectiveness of the working of each club, the equality of all of them, so far as conditions and opportunities are concerned, the maintenance of strict amateurism throughout, the prevention of one club being overshadowed by another by reason of superior financial resources, or by any social or other non-financial inducements that it might offer to players to belong

to it, and too easy facilities for changing clubs.

The dark whispers concerning the purity of the New Zealander's amateurism seem sacrilege after this. It was often hinted in print and verbally that the profits of their tour in England would be utilised in such a manner that would not be complying with, at least, English ideas of what an amateur should be. "English ideas," forsooth!—they are strange and weird; they exist in a country whose many sporting "amateurs" benefit to greater financial extent than professionals, where a man is what he insists upon being called, and where there is an everlasting searching after loopholes through the tissue-paper bound laws.

REAL AMATEURS.

When in the future one wants to refer to the amateur above suspicion, one should mention the New Zealand amateur:—

> Cliques and "swell" clubs are often the ruin of a good growth of young footballers, and in New Zealand it has been determined that there shall be no cliques and no inducements to join special clubs. This determination has been carried into effect in a very summary manner. Just as the authority settles on what clubs there shall be, so with the help of a qualification rule it decides who shall play for those clubs. It divides the city into sections, and it apportions one club to each section. The limits of each section are very carefully defined. The Union has its own map of the city, with all the streets marked upon it, and the precise limits of each section are marked by lines, and further defined in the rules by words. Thus, the dividing line may, and very often does go down the middle of a street, so that one side of that street is in one section and the other side is in another.

This system may have its advantages, just as, even in New Zealand, it must have its disadvantages, and in England it would not be workable for a hundred obvious reasons. As an instance of its probable injustice, suppose that one section of the city has bred and trained a "Gallaher. In the course of time "Gallaher" marries and takes a house opposite his parents, and in another section. The club that has polished off the rough edges that his school training left must lose their artist. Perhaps the New Zealand reply to such a case would be to the effect that a man should be careful of whom he marries, if football is likely to be interfered with.

Not the least interesting feature of this really splendid work is the illustrated portion, which conveys as vividly as can be the New Zealand method of packing, of how the ball should be placed for various kicks under various conditions, how and when to pass, how to tackle, how the hookers (the first two men of a New Zealand scrum) do their work, etc. Hints upon everything that will tend to cause the young idea to shoot in the right direction are given upon training and other things, and there is not a Rugby enthusiast of any shade or degree but who will find hours of instructive entertainment in this "Complete Rugby Footballer," which is published by Methuen and Co., 36, Essex Street, W.C., at the net price of 10s. 6d.

DRUNKENNESS IS PARALYSIS.

It is a noticeable fact that the symptoms of drunkenness are all paralytic and are all due to loss of nervous power and of voluntary control. The flushing of the face shows the paralysis of the small blood vessels; soon the slipshod utterance shows the want of voluntary control over some of the muscles of articulation, the double vision indicates the loss of accommodating power in the eyes, and the staggering gait shows that the loss of control has extended to the larger muscles. Lastly, the drunkard falls prostrate in a condition so closely resembling apoplexy that the most experienced occasionally fail rightly to distinguish the one from the other. If the intemperate use of alcohol be persisted in there soon results a degeneration of all the tissues of the body. The nervous tissues are perhaps the first to suffer, and the shaky hand and tottering gait are infallibly followed by a similar tottering of the intellectual and moral faculties. The stomach resents the constant introduction into it of ardent spirits, and soon refuses properly to digest food. The liver and kidneys give out in a similar way, and the impairment of these functions causes terrible dropsy. The heart gets fatty and weak, the lungs lose their elasticity, and soon there is not a tissue in the body which has not in one way or another succumbed to the ill-treatment to which it has been subjected. —*Health.*

IN THE ARENA OF SPORT.

DISCIPLINE OF SPORT.

The South African Rugby footballers have now arrived in this country. Like the New Zealanders, the South Africans will make the Manchester Hotel, Aldersgate Street, their headquarters.

The members of the team are pure amateurs, and will have no interest in the financial result of the tour. They have agreed to a code of rules of which the following is an extract :—

"No member of the team shall be permitted to act as a correspondent, or engage in any business, during the course of the tour, and no player shall comment in the Press on incidents in matches."

American Sprinter's Curious Starting Position.

NO PLAYER CRITICS.

Therefore we shall see no criticisms by "One of the team." Neither are English clubs likely to have their "gates" improved by obtaining the assistance of a Colonial player.

To prevent this the rules stipulate that—

"No member of the team shall be permitted without the previous sanction of the manager to take part in any athletic or sports meeting, or play in any football match, except meetings or matches connected with the tour."

Mr. J. Carden, the manager, will have full control over the players off the field. He will regulate the travelling, allocate the accommodation, decide what entertainment (if any) should be accepted, and his ruling must be obeyed in all disputes and questions which may arise during the tour.

It is evident the South Africans mean business. Their object is to win matches, and in order to achieve this laudable ambition they readily conform to strict discipline.

Our visitors will receive only "out of pocket" expenses, which means cab fares, railway fares, or omnibus fares expended in travelling to and from matches. Money expended on refreshments, tobacco, or gratuities will not be refunded.

ROYAL LOVERS OF GOLF.

Golf has become an all-the-year-round affair and is played with as much zest on the Continent as in England or Scotland. Some fine play has been seen at Homburg and Marienbad, and King Edward presented a gold handbag to the winner of the ladies' prize, says a writer in *M.A.P.*

Several of our Royalties are experts at the ancient game. Princess Victoria plays well, and the Duke and Duchess of Connaught are both good players. The young Princes of Wales played many a game of golf during their stay on Deeside.

DINNER TO THE COUNTY CHAMPIONS.

The Committee of the Kent County Cricket Club, in response to the expressed wish of many members of the club, are considering whether it may be possible for the club to entertain the Kent eleven at dinner. The numbers anticipated present some difficulty, but the Committee hope to circularise the members in a few days. If the dinner can be arranged, it is likely to be held at the Crystal Palace on October 11th, at 6 p.m.

CHAMPION COUNTY'S HISTORY.

The official history of the Kent County Cricke Club, edited by Lord Harris, is to be published next spring.

Messrs. Eyre and Spottiswoode, the publishers, state that the work has been in preparation for some years past. It will contain not only records of Kent matches, and of the county's leading cricketers, but much information concerning the early history of the game which has never before been published in any cricket book.

The work will be profusely illustrated, and the subscription price is £1 1s. All net profits from the sale will be devoted to a fund for the benefit of deserving Kent professionals.

FOOTBALLERS WHO MAY RETIRE.

The visit of the South Africans may induce some prominent players to postpone their final retirement from the game for another season. Gwyn Nicholls, greatest and best of centre-threes, only played last year because he wished to crown his career against the New Zealanders. He was firmly determined at the close of last season that nothing would induce him to turn out again in serious football. I think from what he said to me that he will adhere to that decision, unless the South Africans should turn out to be as "mighty opposites" as the New Zealanders, and Wales are in dire need of a centre-three. Of the other veterans J. T. Taylor, I am told by the Durham secretary, will play regularly. Hammond, on the other hand, has definitely decided to give up the game—a great loss to England, for Hammond was the most useful forward in the country.

Another great forward, Harding, of the London Welsh, speaks of giving up the game, but will probably play regularly, though I shall be surprised if he takes any part in county football unless it be against the South Africans. Of last season's Scottish pack Cairns and West will probably retire "for good"; but of the Scottish backs the only doubtful starter is C. M. Macleod, who is now engaged in business in Liverpool, and may not care to risk further injury.

Mainprice, Macleod's predecessor as Light Blue captain, will probably not play, as he still suffers from the injury to his shoulder received against Dublin, while the wrench to his knee sustained in last season's match between North and South also troubles him. Simson and Munro, the Scottish halves, will both play for London Scottish. A. O. Jones, concludes Mr. Hamish Stuart in the *Daily Chronicle*, has definitely retired, but as he has joined the London Society of Referees he will be a familiar figure in the field, provided the said Society give him that share of matches to which his career as a player, whose merits were never fully recognised by the powers, seems to entitle him.

We want more referees of his type—men fresh from the game, in sympathy with the players, and able to "keep up" with the fastest game.

COMING BILLIARDS SEASON.

With the retirement of John Roberts, Diggle intends to dispute the right of Stevenson and Dawson to claim supreme position in the billiards world. Messrs. Burroughs and Watts, who have promoted another big American tournament, have succeeded in getting the three cracks to play therein. Curiously enough the other three who have accepted invitations, viz., C. Harverson, M. Inman, and T. Reece, are just as keenly struggling for fourth place.

The heats are 9000 up, and the "Rimington-Wilson Rules" will be adopted. The tourney opens on November 5th. The handicap has not yet been made, but it may be suggested Stevenson and Dawson (scratch); Diggle, 500; Harverson, 2000; Inman, 2250; T. Reece, 2500. Reece has been given the preference over Aiken.

IS MISS SUTTON AN AMERICAN?

A Californian correspondent, writing from Los Angeles, gives some interesting information about Miss May Sutton, the so-called "American" lawn tennis champion. According to this writer, Los Angeles is a cosmopolitan city, with a population which increases each year at the rate of 10,000 people, many of whom are foreigners arriving from all parts of the world.

Captain Sutton and all his family have settled down in this city, and though, as our correspondent goes on to explain, the enthusiastic sportsmen of California are only too glad to claim her as native born owing to her phenomenal success in the lawn tennis world, Miss May Sutton is really not an American at all, but a pure-bred Britisher who has settled in the country.

CHEERFULNESS AND HEALTH.

Cheerfulness is a well known aid to health. A powerful magnet drawing friends just as the little steel horse shoe attracts the pin placed before it. Everyone likes to have around them those who are cheerful, even though they may not feel so themselves. A liberal sprinkling of cheerfulness at home and in the office will make things go more smoothly and pleasantly, and the labour will not wear upon and make wrecks of one like it will if constantly worrying and finding fault over trivial affairs. Cheerfulness acts acts upon the human system as does oil upon machinery. Learn to accept what life brings; though many are the hearts that are scourged by the stern discipline, but try to accept with resignation these cruel lessons of life. It is easy for anyone to be cheerful when everything is favourable; but the power over circumstances to be cheerful when everything is in a turmoil shows and requires self-control, courage and ability. What profit has anyone ever gained by worrying? Cheerfulness is very much a habit, and depends mostly upon the way one looks at the matter. Thus what would give one person a fit of the blues would be treated as of smallest moment by another. Sometimes a heart to heart talk with a friend will dispel the dark cloud from the mental horizon, and help to renew courage and cheerfulness. Turning one's attention to and becoming interested in other subjects is a convenient, helpful and effective way of meeting trials and overcoming the sadness, grief and depression of spirits that materially follows. You can certainly face your trials more cheerfully and bear your burdens more pleasantly, if you learn how to meet them; learn to "choke down" your own trouble and ever to be ready to offer words of sympathy and cheer to others. Keep in the company of little children, birds and flowers; a quiet walk in a lonely wood will often restore one to a normal condition. What cannot be cured must be endured, is a philosophy we should use. Look beyond the present time and resolve to become more cheerful. The world needs strong hands and strong hearts, and these are never gained by worrying. Someone says "I pack my troubles in as little compass as possible, and never allow them to annoy others."—*Word and Work.*

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President - - EUGEN SANDOW.

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Readers are expected to act up to the Club Motto, and for services rendered the President will award to the reader of every published idea, experience or photo, the Club Fellowship Medal as a token that the rightful owner has earned the Fellowship of the Club.

From Debility to Health.

Worthing.

Sir,—I have been a constant reader of your magazine from its first issue, and have derived a great deal of benefit from its numerous articles. Before I started physical culture I was troubled with nervous debility, but by constant use of your combined developer I have benefited to a very great extent. I have started a club for the purpose of introducing your system (which I think is the best in the world) to young fellows of this town, and they are doing splendidly.

J. Phillips.

A Sandow Family.

Johannesburg.

Sir,—I venture to offer my experience of the benefits derived from physical culture under your system. In August, 1901, I felt poorly, and quite run down as the result of sedentary life without sufficient exercise, and at that time, overwork. I mentioned this to a fellow clerk, who was magnificently developed, and the picture of health. He promptly advised me exercise. "You get 'Sandow's Strength and How to Obtain it,'" he said, which I immediately did, read it thoroughly, and the next day discussed the matter with my friend, who further advised me to obtain your spring-grip dumb-bells. I did so, commenced exercising at once, and within a fortnight I began to feel better. About a month later I was transferred to a country place, and whilst there I obtained from you a "six months' course," after which I was entirely different both in health and development, and have never, to this day, required a doctor. I have never left off exercising. I am at present doing a "twelve months' course," and am always "preaching Sandow." I have induced several people to take up physical culture, including my brother and sisters-in-law (four).

Whilst I was doing my first course I met a lady whose little girl was troubled with St. Vitus, and I induced her to obtain a course from you, for both children—the other a boy—and when I last heard from them I learned the girl was quite cured, hale and hearty.

My wife goes in for the exercises regularly, too, having her own developer, and all your charts. We are also teaching our two little girls, aged seven and four respectively. Ever since I commenced your exercises I took in the magazine, and have it always prominently about the house, and in this way it comes under visitors' and friends' notice, when my wife or I always propound the beneficial results of systematic exercise, and offer the magazine, with a suggestion to pass it on.

D. J. Frylinck.

Interesting to Vocalists

Selby, Yorks.

Sir,—I have had rather a lengthy experience with your system, and think that I should know what benefits are to be derived from it. I first took up physical culture in 1899, purchasing all necessary appliances, and have worked with them ever since. I may say that I have not been very fortunate in the way of prize winning, but that did not at all dishearten me. When working for the *Answers*' competition I was staying with some friends for a week or so, and I thought that I had a great opportunity of making known the system there, so I took my appliances and had the pleasure of giving instruction to three young fellows during the time I was there, which afterwards I know led to one of them persuading his friend to try your grips for voice culture, he himself having gained benefit in that way. I may also say that I introduced your system and purchased one of the developers for use in the club-room attached to our football club, and during that season it is rather singular to say it was our best season. I am not going so far as to say that the developer was the cause of this, but no doubt it played its part.

Lately I have taken rather an interest in the different ways the members of the Readers' Club are working, which I think is very creditable indeed. I commenced myself last week with the hope of trying to help the Magazine. I have some three or four dozen spare copies now on hand, and what I am doing is to always carry one with me, and wherever I get to I leave it, where I think the most good will be done, at the same time doing what I can in the way of giving my experience with the system, and to further the distribution of the magazine left.

R. W. W. Bowers.

Not a Week's Illness.

Nottingham.

Sir,—Two years ago I was apprenticed to the baking and confectionery trade, but my health was so bad I had to leave and try other work. I decided to try office work, but that again I had to leave through ill health. A short time ago I was advised by a friend to try your physical culture system, and after a few weeks' exercise I began to improve greatly, and am very pleased to say I have not had a week's illness since. This I attribute to your system, combined with leaving tobacco and alcohol alone.

S. Moore.

Cured of Constipation.

Bristol.

Sir,—I was suffering from rheumatism until eighteen months ago. It was then I purchased a pair of grip dumb-bells. After a trial of about two months I realised what benefit I got from them. They have made a wonderful improvement, not only in my wrist, but forearm and upper arm. I may say my upper arms were 12 inches before starting, now they are 14½ inches, and I have gained about 2 stone. I have also been a constant sufferer from constipation, but now I am completely cured, thanks to Sandow's grips.

Fred Williams.

Never Too Late to Begin.

Harrismith,
South Africa.

Sir,—It is now over two years since I first took it into my head to go in for physical culture. I felt rather afraid at first of not being able to improve to any extent my physical frame, but I hung on to my work considering it my duty to better myself if possible, and with most wonderful results. My reason at first for being afraid was the fact that I was twenty-nine years of age and so thought myself far too old to entertain any thought of improvement. I purchased your books and studied them well and found them of great value. I advanced so quickly that I was enabled to open a physical culture school in this town last year under your system, the membership of the school being thirty-five adults and about fifteen boys. I made some most wonderful improvements in some of the pupils and received great thanks from many parents of the pupils for the benefit the latter had received. I have given papers on Physical Culture at the Wesleyan Guild Hall two or three times and have been the means of many ladies and gentlemen taking up your system of exercises. I hope to commence a good class in connection with the Wesley Guild, which I think should go ahead beautifully. I am trying to advance physical culture to a great extent in this town, because I think there is nothing looks more pleasing to the eye than a finely developed form of either male or female and nothing makes a person feel more bright, happy, and cheerful than good health, and that can be obtained in nearly every instance by commencing a daily exercise with either your dumb bells or developer.

G. D. Dunn.

Judicious Speculation.

Coalville.

Sir,—Money making by speculation by various ways of which there is no end has evolved into a speciality into which hardly anyone cannot even say they are not participants. We Sandowites rejoice in the fact that we speculate on the system advocated by Gladstone, viz.: "Money spent in physical culture pays a higher rate of interest than any other investment." Consequently we are becoming really rich—in health, muscular fitness, and persistent physical energy. But this after all is the recompense for investment in physical culture appurtenances. There are probably fewer enthusiasts that have invested with remunerative success, and unstinted pocket consequently, than Mr. Charles Marshall, the Wakefield physical culturist who modestly informs me that he is a *bit* of a physical culturist, and possesses all Sandow's monthly magazines, Sandow's developers, plaster cast of Sandow's arm, "Sandow on Physical Training" (very rare), "Strength, and How to Obtain It," and "Body Building," nearly all White's and Warick Brooks' poses of Sandow, and prints of new poses taken in Melbourne, also 50 to 100 Heap barbell for heavy exercise. He probably knows a wrinkle or two on speculation.

Henry E. Brown.

Club Photos.

Carlisle.

Sir,—It is with great pleasure I take up my pen to write a few words in praise of your splendid system of physical culture. I have now been a follower of your course for over twelve months, and am pleased to say I have derived great benefit from the same and would advise any person weak in body to procure himself a copy of "Strength, and How to Obtain It," and make himself a happy and worthy specimen of manhood.

I enclose photo of myself after following your chart of exercises, and using nothing but your grip bells, and developer, as I think they are sufficient to build up anybody, however weak. I also enclose a photo of the club of which I am a member, and you will notice we have the developer and grip bells *to the front*, in which place they should always be. If you think photo is worthy of insertion in your most worthy magazine, I should esteem it a great favour.

R. H. Harker.

[I am always glad to receive photos of physical culture clubs in all parts of the world, and, wherever possible, to publish same.—The President.]

Many thanks for the beautiful medal you so kindly sent me, and I beg to say how pleased I am with it.—Bernard V. Kemp (Lewes).

Stalybridge.

Sir,—I am more than pleased with Fellowship Medal; quite a gem. Very many thanks for same.

A. Richardson.

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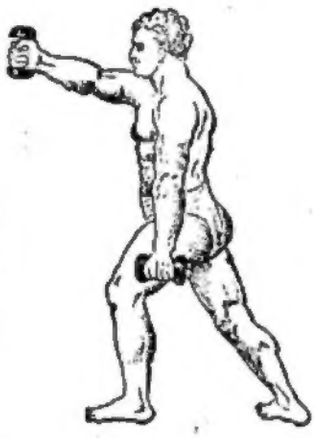

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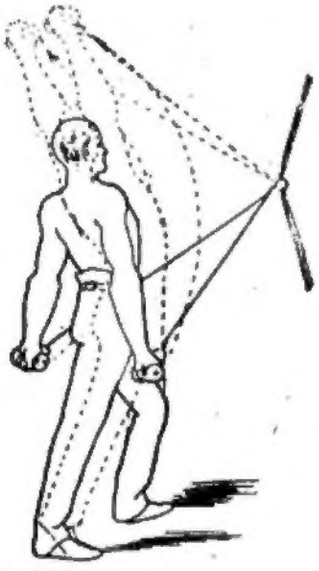

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